ANTECEDENT CONDITIONS IN THE DEVELOPMENT OF EMPATHY AND STYLE OF APPROACH IN EIGHT-YEAR-OLD GIRLS

By

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To my grandmother, Edna Ades,
who always knew about empathy.

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This study investigated the effects of mother's warmth towards infant, mother's warmth towards child, descriptive characteristics of the family, and mother's valuing of empathy in the development of empathy and style of approach in the mother's 8-year-old female child. In addition, the relationships between empathy and style of approach, warmth towards infant and warmth towards child, Verbal IQ and empathy, and Verbal IQ and style of approach were investigated. Empathy was defined as the ability to transpose oneself into the thoughts and feelings of other people. Style of approach was described as the individual's preference to view the world in terms of factual observations (factual style of approach) or subjective inferences (feeling style of approach). Two tests, one to measure child's empathic ability and one to measure child's style of approach, were designed, validated, and verified for reliability.

Seventy third-grade girls were administered the empathy and style of approach tests and two Verbal subtests of the WISC. Their mothers were asked ten questions, five to determine warmth towards the participating child as an infant and five to determine warmth towards the participating child as an 8-year-old. Each mother also completed a biographical questionnaire, indicating descriptive characteristics of the family and degree to which she valued empathic ability in her daughter.

Results indicated that warmth towards infant, warmth towards child, and combined warmth (combined warmth towards infant and warmth towards child) each made a significant difference in the child's development of empathy and feeling style of approach. The direction of difference was positive; daughters of mothers high in maternal warmth were significantly more empathic and more feeling in style of approach than were daughters of mothers low in maternal warmth. There was a significant, positive relationship between empathic ability and feeling style of approach, as there was between warmth towards infant and warmth towards child. Prorated Verbal IQ was not significantly related to style of approach; there was a small but significant relationship between prorated Verbal IQ and empathic ability. This latter relationship did not significantly influence the effects of maternal warmth on empathic ability; there were no significant interaction effects between warmth towards infant and Verbal IQ, warmth towards child and Verbal IQ, or combined warmth and Verbal IQ. None of the following descriptive family characteristics, (a) child's ordinal position, (b) family's religious affiliation, or (c) family's socioeconomic status made a significant difference in the development of empathy or style of approach. Finally, child's ordinal position made a significant difference in maternal warmth. Last-borns received significantly more maternal warmth as infants and as latency-age children than did first- and only-borns.

CHAPTER I

INTRODUCTION

Concept of Empathy

Empathy is a concept that is both crucial and elusive. It has been consistently maintained that the empathic process is a chief component of all human interaction and communication. Borke (1971), for example, described empathy as being "as central for interpersonal development as intelligence is for cognitive development" (p. 263). Thirty years earlier, L. S. Cottrell (1942), a social psychologist, said that empathy is the "basic process" in all social interaction. Fromm-Reichmann (1950) tells us that "the success or failure of psychoanalytic psychotherapy is ... greatly dependent upon whether or not there is an empathic quality between the psychiatrist and the patient" (p. 62). According to Carl Rogers (1957), empathic understanding must be communicated by the psychotherapist in order for personality change to occur.

Definition

While the importance of empathy is widely agreed upon, the actual meaning of empathy is ambiguous. One usage of the term is that it describes a vicarious responding of the perceiver to the experiences of the perceived. The empathizer, according to this viewpoint, makes a kind of kinesthetic inference about what he is observing. Examples of definitions that belong within this theoretical framework are as follows:

(a) "Empathy refers to a kind of 'motor mimicry' which leads to the understanding of other persons" (Lipps, 1907, p. 47).

(b) "Empathy is closely related to mimetic responses which are responses made in imitation, either directly or through analogy, of some associated quality" (Walton, 1936, p. 41).

(c) "Empathy is defined ... as the special case of identification in which the identifier acquires the model's level of anxiety (or any other emotion)" (Stotland and Dunn, 1963, p. 532).

Empathy as social understanding is a second way of viewing this term. In the social understanding framework, empathy involves discernible thought processes. The empathizer must become cognitively, as well as affectively, aware of the feelings, emotions, and thoughts of the other person. He must be able to "put [himself] in the other person's position, establish rapport, and anticipate [the other person's] feeling, reactions, and behavior" (Speroff, 1953, p. 118). Definitions of empathy that exemplify this social understanding approach are:

(a) "A mental state in which one identifies or feels himself in the same state of mind as another person or group" (Warren, 1934, p. 92).

(b) "An objective and insightful awareness of the feelings, emotions, and behavior of another person, and their meaning and significance" (American Psychiatric Association, 1957, p. 16).

(c) " ... the inner experience of sharing in and comprehending the momentary psychological state of another person" (Schafer, 1959, p. 345).

(d) " ... the imaginative transposing of oneself into the thinking, feeling, and acting of another and so structuring the world as he does" (Dymond, 1949, p. 127).

Both of these approaches to empathy involve the ability of the empathizer to sense the experiencing of the other. The difference lies in the way the empathic process is manifested. Thus, proponents of the first approach place little or no emphasis upon mental processes; physical responding is stressed. Those supporting the social understanding viewpoint emphasize the mental component of the empathic reaction. In this second approach, the experience of the other must be verbalized within the empathizer. Of course, mentally comprehending the state of another does not preclude making a physiological response. Hastorf and Bender (1952) view kinesthetic responding as being facilitative in cognitive empathic understanding:

> Empathic ability seems more objective, more cognitive, and more truly perceptive of the psychological structure of the other person. It seems to be a combination of sensory, imaginative, and intellectual processes. Imitative factors, particularly of a kinesthetic nature, may well aid in the process (Hastorf and Bender, 1952, p. 576).

The different theoretical approaches to empathy are reflected in the methods designed to measure it. Thus, Walton (1936), who defined empathy as being " ... closely related to mimetic responses" (p. 41), had children draw lines to describe their reactions to a list of adjectives. Stotland and Dunn (1963) used the palmar sweating index as a measure of empathy. It will be recalled that these authors conceptualized empathy as a vicarious responding on the part of the empathizer. Truax and Carkhuff (1967), defining empathy in the social understanding framework, placed emphasis upon the ability to communicate as well as to perceive" ... the feelings of the patient and the meaning of those feelings" (p. 285). Consequently, the instrument they designed for measuring empathy involved rating the quality of the empathizer's verbal responses to the feelings of the other person.

Empathy and Related Variables

Long before instruments were designed to measure empathy, it was apparent from a common sense viewpoint that people differed greatly in this ability. Individuals who could "put themselves in other people's shoes" were obviously quite different from those who "couldn't see beyond their own noses." Once methods of measuring empathy were developed, however, it became possible to conduct operational studies of how these high and low empathizers were different. Thus, Kerr (1954) found that ability to empathize was positively related to constructive social values and outgoing social behavior. Hekmat, Khajavi, and Mehryar (1975) came to similar conclusions; their data indicated that empathy was negatively correlated with alienation and discomfort and positively correlated with extraversion. Stotland and Dunn (1963) found a greater tendency of persons high in self-esteem to empathize than those low in self-esteem. Dymond (1950) used the combined results of the WISC, Rorschach, TAT, California Ethnocentrism test, and subject's self-analysis to draw the following tentative conclusions about high and low empathizers:

> High empathizers are outgoing, optimistic, warm, emotional people, who have a strong interest in others. They are flexible people whose emotional relations with others, particularly their early family relations, have been sufficiently satisfying so that they find investing in others emotionally rewarding....

> Those low in empathy are rather rigid, introverted people who are subject to outbursts of uncontrolled emotionality .... They are either self-centered and demanding in their emotional contacts or else lone wolves who prefer to get along without strong ties to other people (Dymond, 1950, p. 349).

Development of Empathic Ability

Discovering personality concomitants of empathic ability helps us gain a more complete picture of high and low empathizers. It also prompts the question that exposes a huge gap in our knowledge about empathic ability. The question: If high and low empathizers are so different, how did they get that way? The answer: We don't know. To date, very little is known experimentally about how empathic ability develops.

If we are to understand the genesis of any ability or behavior, it seems reasonable to begin at the beginning. "The beginning" for all men is the child. The issue of how empathy develops will therefore be approached from its development in the child. The question then becomes: If we can differentiate among children in their ability to empathize, can we discover any antecedent conditions to explain the individual differences?

Studies Related to Empathic Ability in Children

Most studies designed to test empathy in children have focused on the relationship between empathic ability and age (Borke, 1971; Burns and Cavey, 1957; Chandler and

Greenspan, 1972; Dimitrovsky, 1964; Dymond, Hughes, and Raabe, 1952). A few studies (Feshbach and Roe, 1968; Walton, 1936) have attempted to uncover individual differences in children's empathic abilities as they appear within a single age group. When investigators found individual differences among same-age children, however, no systematic attempt was made to look for conditions in the child's development that might have accounted for these differences. This failure to investigate, experimentally, antecedent influences seems especially faulty when we note the many theories in the psychological literature linking maternal variables to the development of empathy in the child.

Mother-Infant Empathic Communication and the Development of Empathy

The concept of mother-infant empathic communication had its roots in the writings of Harry Stack Sullivan. Sullivan called the empathic process between mother and infant "that peculiar emotional linkage" that exists "long before there are signs of any understanding of emotional expression" (Sullivan, 1947, p. 8). He posited that feelings communicated by the mother would be reflected in the emotional state of the child: "The tension of anxiety, when present in the mothering one, induces anxiety in the infant" (Sullivan, 1953, p. 41).

The writings of Christine Olden (1953) offer support to the belief that empathic communication exists between mother and infant. Olden hypothesized that later feelings of comfort with empathic communication might be rooted in the early empathic relationship with the mother. In her words:

> I believe the phenomenon of empathy to be as deep and early as the first days and weeks of life, when there was no outside world, no "I," when the complete oneness with the mother provided only the subjective experience of comfort and discomfort.... This earliest experience of unity with the world and the mother may possibly be the root and pattern of our later feeling of comfort when an empathic contact is made, and of discomfort when we have not successfully achieved this (Olden, 1953, p. 114).

Halpern and Lesser (1960) expanded upon Olden's ideas when they wrote that differences in amount and quality of emotional communication between mother and infant was the key factor in the development of empathy. Specifically, they posited that pleasant experiences with the infant through empathic communication would encourage the infant to develop an empathic mode of communication. Conversely, unpleasant experiences with the mother through empathic communication would discourage the infant from developing an empathic mode of communication. In their words:

> If the infant's most frequent somatic experiences through empathy have been pleasant (euphoria and a reduction of tensions) it may be expected ... that his use of empathy will be rewarded and he will tend to further develop this form of communicative reception. If, however, empathy has led to

> unpleasant somatic experiences - no reduction of tension or increased tension - the infant's tendency to empathize will be consequently extinguished. And, most important, the infant's learned empathic "attitude" will not be restricted to the conception of cues from the mothering one but will be applied ... to all other persons. Theoretically, the infant's generalized "attitude" could range from complete openness to empathic communication to complete rejection of it (Halpern and Lesser, 1960, pp. 33-34).

Anna Freud (1953) described the satisfactions that the infant needs from the mothering one in order to develop love for and closeness to other people:

> So long as the mother is constant in her role as provider for the child, without undue interruptions through physical absence or undue preoccupation with other persons or matters of interest in her life, there is every chance that the child's attachment to her will remain constant now and that there will be a secure basis for the growth and development of further, similar attachments to the father, to siblings, and finally to people outside the family. On the other hand, in cases where the mother has carried out her job as a provider indifferently, or has allowed too many other people to substitute for herself, the transformation from greedy stomach-love to a truly constant love attachment will be slow to come. The infant may remain too insecure and too worried about the fulfillment of his needs to have sufficient feeling to spare for the person, or persons, who provided for them (Freud, 1953, p. 17).

According to almost all definitions of empathy, being willing to "spare" feeling for the other person is a necessary component of the empathic process. Thus, we can infer from Anna Freud's statement that the child who has had a relatively cold, non-nurturant mother will be less likely to develop an ability to empathize than will the child who has had a warm and caring mother. (Henceforth, the terms "nurturant" and "warm" will be used synonomously [as will the terms "non-nurturant" and "cold"]. Warmth [or nurturance] will be defined as encompassing "... love, acceptance, enthusiasm, an outgoingness of affection" [Sears, Maccoby, and Levin, 1957, p. 30].)

Thus far, it has been suggested that the development of empathic ability is rooted in the relationship between mother and infant. A nurturant mother will fill the infant with good feelings about the empathic "flow." As the infant grows, he will want to replicate this type of close communication in his relationships with other people. A cold mother-infant relationship should have an opposite effect; the infant will not have good feelings about empathic communication and will tend to avoid developing an empathic mode of communication.

While these ideas are interesting, they are completely hypothetical. At this point, it would be useful to see if any empirical studies appear in the literature that would support the notion that maternal warmth is directly related to the development of empathy in the child. Before proceeding, however, it is necessary to specify how empathy is being defined in this study. Arguments have been made for conceptualizing empathy as a vicarious physiological responding. Arguments have also been made for defining empathy as a type of social understanding that involves cognitive--as well as affective--processes (see pp. 1-4).

Since the cognitive mode is used most often in relating to one another in our society (the novelty of nonverbal encounter group exercises attests to this), I have chosen to define empathy in the social understanding framework. Throughout this study, empathy will be defined as "the imaginative transposing of oneself into the thinking, feeling and acting of another and so structuring the world as he does" (Dymond, 1949, p. 127).

Empirical Studies Related to Mother Nurturance and the Development of Empathy

Social psychologist and philosopher Mead (1934) posited that empathic abilities develop and grow through imitative learning. This view was supported by Moreno (1956) who stressed role-taking behavior as a way of developing empathic understanding of another person. It has been experimentally demonstrated that for a child, especially a female child, the most influential model for imitative learning is the same-sex parent (Hartup, 1962; Hetherington and Frankie, 1967; Levin and Sears, 1956). Bandura and Huston (1961) found that children will display significantly more incidental imitative behavior if they are imitating a nurturant rather than a non-nurturant model. Similarly, Aronfreed and Paskal (cited in Aronfreed, 1968) found that children who interacted with verbally expressive and physically affectionate models were more likely to demonstrate altruistic behavior than were children exposed to less expressive and/or less affectionate models. Mussen and Parker (1965) integrated both sets of findings (influence of same-sex parent and influence of nurturance) when they demonstrated that girls with nurturant mothers were significantly more likely to imitate their mothers' incidental behaviors than were girls with non-nurturant mothers. Similar data was obtained by Hetherington and Frankie (1967); they found that not only did girls imitate high-warm mothers more often than low-warm mothers, but that warmth was the most influential factor in a girl's imitation of her mother. It can be inferred from these studies that girls tend to imitate a nurturant mother--even without teaching or direct rewards--because the nurturant mother has acquired a secondary reward value.

None of these imitative learning studies focused specifically on the development of the child's ability to empathize. Based on the findings reported, however, it can be postulated that a warm or nurturant mother would facilitate empathic behavior in her female child. The rationale behind this statement is as follows:

1. A female child tends to imitate her mother (Hartup, 1962; Hetherington and Frankie, 1967; Levin and Sears, 1956).

2. A female child tends to spontaneously imitate the behaviors of a nurturant rather than a non-nurturant mother (Hetherington and Frankie, 1967; Mussen and Parker, 1965).

3. A nurturant mother displays warm, caring behaviors to the child (Sears _et al_., 1957).

4. It is therefore likely that the female child of a nurturant mother will imitate nurturant behaviors.

5. It has been suggested (Chance and Meaders, 1960; Dymond, 1950; May, 1967) that nurturant behaviors (warmth, closeness, affection) are important elements in the empathic individual's personality.

Integration of Psychoanalytic and Social Learning Viewpoints

Thus far, the development of empathy has been discussed from two different perspectives. The first approach evolves primarily within a psychoanalytic framework and places most emphasis upon the nonverbal communication between mother and infant. The focus is upon how this early emotional relationship either facilitates or retards the development of empathy. The writings in the psychoanalytic framework are mainly theoretical; little attempt has been made to pinpoint the specific behavioral mechanisms that operate in the acquiring of empathic behavior.

The second approach to empathy is based upon the theories of social scientists and the related data of social learning studies. Several social scientists have described empathy as a learned behavior, developing chiefly through imitation. While they have not attempted to test their theories experimentally, the empirical work done on imitative learning behavior in children can serve as a useful base from which to develop testable hypotheses concerning the development of empathic behavior.

I see these two approaches as being quite harmonious with one another. The theories of the social scientists and the data of social learning studies do not contradict the analytic formulations, as the analytic formulations are not counter to the social learning theories and experimental data. There is, however, a major difference in the age focus of each approach. The social learning approach deals with imitative behavior and is thus attending to behaviors that have been occurring from infancy through childhood. The analytic approach focuses on a much smaller segment of behavior. It is concerned primarily with the mother-infant flow of communication and is not paying as much attention to interactions between mother and post-infancy age child. I believe that the early mother-infant communication is important for the development of empathy, and will attempt to support this belief with empirical data. It is also my belief that the relationship between the mother and older (beyond infancy) child is important for the growth of empathy, and that one must look at this later relationship as well. Thus, in developing experimental hypotheses in the present study, both analytic and social learning viewpoints will be included.

Style of Approach as Related to Development of Empathy

A child may be able to transpose himself into the thoughts and feelings of others, and yet display little interest in spontaneously doing so. Such a child prefers to focus his attention on facts, ideas or details rather than on the emotional elements of a person or situation. Perhaps an illustration would be useful here. Let us envison a third-grade classroom. John Tremble is asked to come to the front of the room to read. As he begins reading, it is apparent that he is nervous and upset. He stumbles over his words; his hands start shaking; tears come to his eyes. Two different children in the room are asked to describe what is happening. When Lisa is asked "What is happening?" she responds, "John is standing up there and he is not reading very well. His hands are shaking, and he's not pronouncing his words right." Wendy's response to the same question is, "John is feeling so scared about being up there that he can't read. I bet he wishes he could sit down." Quite obviously, Lisa focuses on factual observations while Wendy makes subjective inferences. It is very possible that if Lisa were asked to describe how John were feeling, she could make some subjective inferences too. The point is, however, that Lisa spontaneously chose to approach the problem from a factual viewpoint while Wendy chose to dwell in the world of feelings. It can be inferred from studies conducted by Dymond, Hughes, and Raabe (1952) and Gilbert (1969) that the child who more frequently describes situations in terms of feelings is the more empathic child. Thus, when Dymond, Hughes, and Raabe measured empathy in children, they gave the highest empathy score to the child who: (a) described the most number of characters on a modified TAT card in terms of their (the characters') thoughts and feelings, and (b) needed the least amount of prodding to elicit these feeling-type responses. Gilbert's study investigated the young child's awareness of affect concepts. She defined affect concepts as "subjective feelings with familiar labels, such as 'afraid,' 'scared,' 'happy,' 'angry,' and 'sad'" (Gilbert, 1969, p. 629). These affects, according to Gilbert, are learned. Two important findings emerged from Gilbert's data: (a) "A child's knowledge and acknowledgment of affect concepts are part of a general orientation which he uses in his awareness of self and in his interpretations of other people" (p. 638); and (b) ... "high affect-aware children are more empathic in their relations with other children" (p. 635).

In the present study, style of approach (SOA) will be defined as a child's spontaneous preference to view the world in terms of factual observations or in terms of subjective inferences. This preference will be described along a continuum from high factual (low feeling) to low factual (high feeling). Based on the Dymond, Hughes, and Raabe and Gilbert studies, one would expect to find a positive relationship between ability to empathize and feeling SOA. It was previously hypothesized that a warm or nurturant mother would facilitate empathic behavior in her female child. If empathic ability and feeling SOA are positively related, one would expect that the daughter of a nurturant mother would develop a more feeling SOA than would the daughter of a non-nurturant mother.

Valuing of Empathy as Related to the Development of Empathy

Earlier, it was posited that the nurturant mother acquires a secondary reward value; the child, therefore, will want to imitate her behavior even in the absence of direct rewards and teaching. This does not mean, however, that direct reinforcement plays no role in the development of empathy. A mother may have a strong preference regarding the development of empathy in her child. (This preference may be independent of or related to her warmth towards the child.) The mother who highly values the ability to empathize will undoubtedly reinforce empathic behavior when it appears in her child. The mother who less values empathic behavior will not reinforce, and may even negatively reinforce, empathic behavior in her child. Miller and Dollard (1941) consider direct reinforcement to be a main factor in the appearance of learned behavior. They state that "[learned behavior] will tend to appear when it is rewarded and tend not to appear when it is non-rewarded or punished" (p. 183). Thus, in tracing the development of empathy, it is important to consider how much the mother values the appearance of empathic behavior in her child.

Based on reinforcement learning theory, the child whose mother highly values empathic behavior should be more empathic than the child whose mother less values the appearance of empathic behavior. Assuming a significantly positive relationship between empathy and feeling SOA, it is also hypothesized that the child of a mother who highly values empathic behavior should have a more feeling than factual SOA; conversely, the child of a mother who less values empathic behavior should have a more factual than feeling SOA.

Characteristics of Child's Family as Related to the Development of Empathy

Thus far, it has been hypothesized that a mother's warmth towards her infant and child and her valuing of empathic behavior are the major influences in the development of empathy and feeling SOA in the child. Other factors, specifically descriptive characteristics of the child's immediate family, may play a role in empathy and SOA development. Child's ordinal position in the family is one such factor. Stotland and Dunn (1963) and Stotland and Walsh (1963) found that later-borns tended to empathize more than first- and only-borns with people similar to themselves. Gilbert's (1969) data indicated that among Jewish children, first-borns were more empathic than later-borns; no significant relationship between birth order and empathic ability was found among non-Jewish children.

Socioeconomic status, through its influence on parental behaviors, may affect the development of empathy and SOA. Maccoby and Gibbs (1954) and Sears *et al*. (1957) found that upper-middle and middle-class mothers expressed more warmth towards their children than did upper-lower and lower-class mothers. Psychological concepts of feeling have been noted more frequently in the language of middle-class adults than in the language of lower-class adults (Bernstein, 1961; Hess and Shipman, 1965). Kohn (1959) found that in girls, middle-class mothers valued "consideration of others" more highly than did lower-class mothers; the latter placed more emphasis on obedience, neatness, and good manners.

Empathic ability and SOA may be affected by the family's religious affiliation, although there is little evidence to support this. Kohn (1959) found that when socioeconomic class was held constant, Protestant, Catholic, and Jewish mothers did not differ significantly in their desire to see their daughters behave empathically. Sears *et al*. (1957) found that social class was a more powerful factor than ethnicity in accounting for differences in child rearing. These latter investigators did note, however, that among middle-class families, Jewish mothers were emotionally warmer than were other mothers. This trend was consistent with the findings reported by Zborowski (1953) that Jewish people have a tendency to be emotionally expressive.

The dramatic responses of young children to prolonged separations from their mothers have been cited by a number of investigators (Bowlby, 1965; Freud, 1953; Heinicke, 1956). Bowlby observed, for example, that a young child separated from his or her mother demonstrated a predictable sequence of behaviors over time. The sequence involved three stages--protest, despair, and detachment. The behaviors mainfested in the detachment phase were described as follows:

> [The child] will gradually commit himself less and less to succeeding figures and in time will stop altogether the risk of attaching himself to anyone. Instead he will become increasingly self-centered and, instead of directing his desires and feelings towards people, become preoccupied with material things such as sweets, toys, and food (Bowlby, 1965, p. 142).

This withdrawal from human attachments and relationships is, of course, antithetical to the development of empathy and feeling SOA. Thus, in the present study, the amount of separation between mother and child will be measured and analyzed for its effects on empathic and SOA development.

Presence or absence of the father in the home could affect the child's development of empathy and SOA. Based on his recordings of the fantasies of recently (less than 3 years) father-separated children, Bach (1946) proposed that the mother's influence on the child's personality development becomes more powerful in the father-absent home. Lynn and Sawrey (1959) investigated the effects of temporary father-absence on 8- to 9-year-old Norwegian boys and girls and found that father-absent girls were significantly more dependent on their mothers than were father-present girls. (It should be noted, however, that in both the Bach and Lynn and Sawrey studies, father-absence had greater effects upon boys than upon girls.) It is thus possible that the mother's warmth (or lack of it) is a more powerful factor in the girl's development of empathy and SOA in a father-absent home than in a father-present home.

These studies involving ordinal position, socio-economic status, religious affiliation, amount of separation from mother, and presence or absence of father found strong tendencies more often than significance. In the investigations exploring influence of ordinal position, the findings were somewhat contradictory; in the studies involving religious affiliation, there was little indication that religion made a difference. The studies concerning absent fathers were only indirectly related to mother's warmth and the development of empathic ability and SOA. Therefore, in the present study, hypotheses concerning the descriptive family characteristics will be considered minor (rather than major) hypotheses.

Pilot Work

In order to investigate the ideas that have been posited thus far, one needs access to the following test instruments:

(a) a valid and reliable test for measuring SOA in children,

(b) a valid and reliable test for measuring empathy in children,

(c) a valid and reliable instrument for measuring warmth towards infant and warmth towards child in mothers,

(d) a system for obtaining descriptive data from mothers regarding number and order of children in the family, family's socioeconomic status, family's religious affiliation(s), amount of separation between mother and daughter, presence or absence of father in the home, and

(e) an effective instrument for measuring mother's VOE.

Pilot work was conducted in order to develop these test instruments.

Subjects

Subjects who participated in the pilot work were (a) forty-one third-grade girls, ages 8- to 9-years-old, in attendance at two public elementary schools in a suburban community in New England (henceforth, this community will be called Shore), and (b) seven mothers of third-grade girls, also living in a suburban New England community. The subjects were all Caucasian, and were of different religious and socioeconomic backgrounds. Approval from Shore's Superintendent of Schools and parental consent were needed in order to test the schoolchildren. (A copy of the parent permission form can be found in Appendix A.)

Eight- to 9-year-old girls and their mothers were chosen as the pilot work groups for the following reasons:

1. Feshbach and Roe (1968) have shown that children tend to respond more empathically to stimulus subjects who are more similar to themselves. In order to control for the effects of similarity/dissimilarity to stimulus subjects, it was decided to keep sex of the experimental subjects constant. Girls rather than boys were tested mainly because in some studies (Borke, 1973; Dimitrovsky, 1964) girls were found to be more accurate than boys in identifying emotions; it was thus hypothesized that girls might feel more comfortable in responding to the SOA and empathy questions. (It should be noted, however, that a larger number of studies found no relationship between accurate perception of emotions and sex [Borke, 1971; Feshbach and Roe, 1968; Rothenberg, 1970; Walton, 1936].)

2. The development of empathy has thus far been discussed from two perspectives: (a) the social learning viewpoint that empathy is learned from a nurturant, same-sex parent, and (b) the analytic viewpoint that the roots of empathy are in the empathic flow of communication between mother and infant. In order to investigate the ideas expressed by both approaches, it was necessary to interview mothers rather than fathers.

3. There has been controversy in the literature as to when children are capable of understanding the feelings of another person. Burns and Cavey (1957) and Chandler and Greenspan (1972) found that children younger than 6-years-old were generally unable to adopt the viewpoints of others.

These findings were consistent with Piagetan theory that a child younger than 7 years is "unconsciously centered upon himself" (Piaget, 1967, p. 21) and therefore incapable of seeing things from another person's perspective. Borke (1971, 1973) disagreed with these ideas, saying that the instruments designed to measure empathy were beyond the cognitive capabilities of very young children. Using a simplified procedure for measuring empathy, Borke (1971, 1973) found that children as young as 3-years-old were able to comprehend the feelings of others. In order to avoid becoming enmeshed in a not-as-yet resolved conflict, it was decided, in this pilot work, to test children older than 6 years of age. Eight- to 9-year-olds (third-graders) were selected as the experimental age group.

Shore was selected as the town in which to test the schoolchildren for the following reasons:

1. Shore's school system is considered sophisticated in its interest in psychological phenomenon. Consequently, Shore's principals, teachers, and parents are generally not adverse to participating in psychological studies.

2. There are distinct socioeconomic districts in Shore, ranging from very rich to very poor; this range facilitates exploration of socioeconomic factors in the development of children's empathic and SOA abilities.

3. In order to control for the possible confounding effects of similarity/dissimilarity to the stimulus subjects (Feshbach and Roe, 1968) and to the examiner, it

was decided to test Caucasian children only. Shore's population is approximately 99.5% Caucasian.

Development of the SOA Test

It will be recalled that SOA was defined as the child's spontaneous preference to view the world in terms of factual observations or in terms of subjective inferences. The original test developed to measure SOA consisted of 10 Tasks of Emotional Development (TED) cards (Cohen and Weil, 1971), female latency age series. (The TED cards, female latency age series, consist of photographs of 7- to 10-year-old girls engaged in a variety of age-appropriate activities [playing with friends, doing homework, etc.].) The cards were presented one at a time to each 8-year-old subject. As the subject looked at the photograph, the examiner pointed to one of the characters on the card and said: "Tell me something about this person in the picture. You can tell me anything at all about her, make it as long or as short as you like, and just let me know when you are finished." Ten out of the first eleven girls tested described the characters exclusively in terms of factual details. Thus, a typical response was: "This girl is wearing a white blouse with ... kind of like ruffles on it. And she has a black skirt and white socks and her shoes have buckles on them. Her hand is on the door." In examining the responses, it seemed that the subjects were interpreting the task as "How many details can you spot about this character?" The subjects' teachers suggested that the TED photographs might be too similar to the stimuli that the children are taught with, where they are encouraged to be observant about specific details of a character. Thus, a different stimulus material, the Sarbin Stick Figures (Sarbin, 1954), was used to test SOA. (The Sarbin Stick Figures, developed for the Sarbin Stick Figures Test, are line drawings of human figures in various postures. The Sarbin Stick Figures Test was designed to measure empathy by having a person identify from a multiple-choice list the emotions expressed by the postures of the various stick figures.)

In the revised SOA test, ten of the Sarbin Stick Figures (numbers 14, 19, 15, 18, 20, 27, 38, 43, 45, and 46) were presented to each child, one at a time, in the above order. The child was asked to " ... tell about the person in the picture. You can say anything at all about the person, make it as long or as short as you like, and just let me know when you are finished." Subjects' responses were scored along a continuum of completely factual observation to highly subjective inference (see Appendix B). The scoring system was based on a system developed by Gilbert (1969). Since the lowest feeling (and highest factual) response earned 1 point, and the highest feeling (lowest factual) response earned 4 points, an SOA score could range from 10 to 40 points. The scores of the thirty girls tested (eleven of the original forty-one subjects were eliminated in the initial SOA testing) ranged from 13 to 35 points, with a somewhat bimodal distribution (peaks at 23 and 33 points), a mean score of 25.5 and a standard deviation of 7.72. The wide range of scores, combined with the 7.72 standard deviation, indicated that the SOA test had effective discriminatory power.

The reliability of the scoring system was determined by having two independent judges score the SOA tests. An interjudge reliability correlation (df = 28) of .93, $p < .01$ was obtained.

The reliability of the SOA test itself was determined through the test-retest method. The subjects were retested approximately 6 weeks after the original administration of the test. Comparison of the second administration test scores with the first administration test scores yielded a reliability coefficient (df = 28) of .90, $p < .01$.

Validity measures for the SOA test will be reported in the next section.

Development of the Empathy Test

Earlier, empathy was defined as "the imaginative transposing of oneself into the thinking, feeling, and acting of another, and so structuring the world as he does" (Dymond, 1949, p. 127). Based on this definition, the child who is a better empathizer should be better able to perceive the thoughts and feelings of a character in a social situation. Dymond, Hughes and Raabe's empathy test (1952), used with second-graders, involved showing the child a modified TAT card, telling the child a story to accompany the card, and asking him to "tell about the people in the picture; what do you suppose they are thinking and feeling?" The child's score was based not only on the content of his responses, but also on the number of people he chose to describe.

Other tests (of which there are few) designed to measure empathy in latency age children have asked children to choose a face that is appropriate to the emotions expressed in a story (Borke, 1971), or to identify which of four emotions was being expressed by a vocal quality (Dimitrovsky, 1964), or to express his vicarious feeling in response to the emotional tone of a story (Feshbach and Roe, 1968). None of these empathy tests for children has been validated. Thus, there is no statistical reason for claiming one approach to be superior to another. The present investigator chose to design an empathy test modeled after Dymond, Hughes and Raabe's empathy test, however, for the following reasons:

1. Measuring a child's vicarious response to the emotional tone of a story (à la Feshbach and Roe) minimizes, if not eliminates, the cognitive component of the empathic process. In describing his vicarious feelings, a child is not required to comprehend what is happening to the other (although he may be comprehending the other's experience in the process of making a vicarious response). This

investigator agrees with Dymond (1949), Borke (1971), Schafer (1959) and others who view cognitive comprehension as an essential element in the empathic process. Thus, the Feshbach and Roe approach to measuring empathy in children was not considered for use in the development of the present empathy test.

2. Borke (1971) and Dimitrovsky (1964) had the child identify which of four emotions was being expressed in a story or in a character's tone of voice, respectively. Both procedures involved the child's choosing the "correct" face (the face portraying the emotion being expressed). This approach does recognize the cognitive component of the empathic process. However, by asking the child to choose one "right" answer, one may be putting too much emphasis on the cognitive component of empathy. The child may know, for example, that a sad face belongs with a story about a lost dog. This knowledge does not mean, however, that the child is putting himself into the thoughts and feelings of the one who lost the dog; the child can choose the correct answer with or without having an affective involvement in the situation.

3. In Dymond, Hughes, and Raabe's empathy test, the child is allowed to answer freely. By not limiting the child to making one of four responses, one can get a more accurate and complete picture of his ability to "feel himself into" the thoughts and feelings of others. Furthermore, the Dymond, Hughes and Raabe test does recognize and

incorporate the cognitive components of the empathic process.

The procedure used in the present pilot work was as follows: The 8-year-old subjects were shown TED cards 8, 9, 2, 1, 7, and 6 (in that order) from the female latency age series. As the child looked at each stimulus card, the interviewer told her a story to explain what was happening in the photograph (see Appendix C). The child was then asked to describe how the characters in the photograph were thinking and feeling. A control procedure was incorporated into the empathy test. A seventh TED card (card 11) and accompanying story (see Appendix C) were presented to the child; the child was asked to tell what the people in the picture were wearing. According to the empathy test scoring system (see Appendix D), a child's score is lowered if she chooses to describe the feelings of only one (rather than two or three) characters in the photograph. (The rationale behind this system is based on Dymond, Hughes and Raabe's hypothesis that " ... a child with low empathy would be less able to take the role of others in the fictitious social situations, as he would not have a backlog of thoughts and feelings of others incorporated from past face-to-face experiences" [Dymond, Hughes, and Raabe, 1952, p. 203].) The control procedure was designed to eliminate the possibility that one was not measuring the child's role-taking experiences, but rather was testing the child's set to (a) not listen to instructions, or (b) visually ignore a second or third person in a picture. The child's response on the control procedure card was not included in her empathy score.

Successful execution of the empathy test required that the child understand the concepts "thinking" and "feeling." In order to determine the 8-year-old's ability to understand these two concepts, a "thinking-feeling" (T-F) procedure, based on the work of Borke (1971), was developed. The T-F procedure involved showing the child pictures of children with different facial expressions, telling a story about each stimulus figure, and then asking the child to describe how the stimulus subject was thinking and feeling (see Appendix E). Eleven out of the 11 children tested on T-F (these were the same 11 children who were eliminated from the pilot study after the initial SOA testing) understood the concepts "thinking" and "feeling." Because of the high success rate on this task, it was decided to administer the T-F procedure only if the child did not achieve a certain criterion score (7 points) on the empathy test. (Children who scored less than 3 points on the empathy test, regardless of performance on the T-F procedure, were eliminated from the study. Children who scored between 3 and 6 points on the empathy test were included in the study if they responded appropriately to two or more thinking and/or feeling exercises, and eliminated if they did not respond appropriately to at least two thinking and/or feeling exercises.)

Thirty subjects (the same 30 subjects who received the revised SOA test) were given the empathy test and control procedure. Their scores ranged from 6 to 26 points, with a mean score of 18.5 and a standard deviation of 6.58. All 30 subjects described what both people in the control photograph were wearing. The wide range of scores combined with the 6.58 standard deviation indicated that the empathy test had effective discriminatory power.

The reliability of the empathy test scoring system was determined by comparing the independent ratings of two judges. An interjudge reliability correlation (df = 28) of .91, $p < .01$ was obtained.

The test-retest method was used to determine the reliability of the empathy test. Subjects were retested approximately 6 weeks after the original administration of the test. Comparison of the second administration test scores with the first administration test scores yielded a reliability coefficient (df = 28) of .94, $p < .01$.

Determining Validity of SOA and Empathy Tests

A main goal of this pilot work was to determine the validity of the SOA and empathy tests. This was a difficult task. Predictive or concurrent validity methods were inapplicable since there existed no valid and reliable test against which to compare the pilot work data. A content validity procedure was inappropriate since there was no established universe of content as defining the concept empathy. Thus, it was necessary to explore validity through a construct validity procedure.

The 30 subjects tested on the revised SOA test and the empathy test were members of three different third-grade classrooms. It was decided that their third-grade teachers would be the source of construct validity information. First, each teacher was given a set of five situations, about which she was to respond for each participating girl in her class. These five situations were designed to quantify the teachers' perceptions of the girls' empathic abilities. (Instructions to the teachers and the five situations, and the scoring system can be found in Appendices F and G, respectively.) The distributions of Teacher 2's and Teacher 3's scores on the five situations task were too narrow for statistical analysis. The range and standard deviation of Teacher 1's scores on the five situations task were large enough for statistical analysis. The Pearson Product-Moment Correlation test was used to compare the SOA and empathy scores of Teacher 1's participating girls with Teacher 1's five situations responses. The correlation coefficients between SOA scores and the five situations scores and between empathy scores and the five situations scores were significant for Teacher 1 (see Table 1). Since the five situations task could be

Table 1

Testing Validity: Correlations of Teachers' Rankings and Five Situations Scores with SOA and Empathy Scores

	Five Situations		Ranking Procedure	
Teacher	SOA Scores (Pearson r)	Empathy Scores (Pearson r)	SOA Scores (Spearman Rho)	Empathy Scores (Spearman Rho)
1[a]	.71*	.65*	.56*	.80*
2[b]	NC	NC	.66	.28
3[c]	NC	NC	.45	.00

Note. NC = not computed (distribution of scores too small for statistical analysis).

[a] Teacher 1 responded for 12 participating girls.

[b] Teacher 2 responded for 7 participating girls.

[c] Teacher 3 responded for 7 participating girls.

$^{*}p < .05$.

$^{**}p < .01$.

statistically analyzed with only one teacher, another method for exploring teachers' perceptions of children's empathic abilities was attempted. The teachers were given an instruction and answer sheet and asked to rank order each participating girl according to the child's ability to empathize (see Appendix H). The Spearman Rho test was used to correlate these ranks with the girls' ranks on the SOA and empathy tests. Results of the Spearman Rho test appear in Table 1. It can be seen that Teacher 1's rankings were significantly correlated with SOA and empathy score rankings at the .05 and .01 levels respectively. The correlations of Teacher 2's rankings with SOA and empathy score rankings were not significant. Teacher 3's rankings were not significantly correlated with either SOA or empathy score rankings. In exploring these data, it is important to consider the small numbers of subjects (7) in the classes of Teachers 2 and 3. While none of the four correlations of Teachers 2 and 3 reached significance, three of the four correlations were positive (.66, .28, and .45--see Table 1). One could therefore not rule out validity on the basis of these two teachers' rankings. Teacher 1's rankings were significantly correlated with SOA and empathy score rankings; concomitantly, her five situations test scores were significantly correlated with SOA and empathy scores. The fact that her opinions, derived from two completely different tasks, significantly correlated with both SOA and empathy, is reasonable evidence that construct validity had been achieved.

Verbal Intelligence, SOA, and Empathy

Both SOA and empathy scores were derived from children's verbal responses to verbal questions. It is therefore possible that Verbal Intelligence, rather than SOA or empathic ability, was the main contributing factor in score differences. In order to investigate the possible confounding effects of Intelligence, each child was administered two Verbal subtests, Comprehension and Vocabulary, of the Wechsler Intelligence Scale for Children (WISC) (Wechsler, 1949). The Vocabulary subtest was chosen for its high correlation with total Verbal Intelligence Quotient (VIQ) (Wechsler, 1949), and Comprehension, for its relevance to the skills required in the SOA and empathy tests. A VIQ score was determined for each child by prorating the two subtest scores. (The range of prorated VIQ scores was from 79 to 125, with a mean of 100.) A Pearson Product-Moment Correlation test was conducted to determine the relationships of SOA and VIQ and of empathy and VIQ. The results were as follows:

Correlation between SOA and VIQ (df = 28) = .06, $p > .05$.

Correlation between empathy and VIQ (df = 28) = .35, $p > .05$.

Although neither correlation achieved significance, both were in a positive direction. It was therefore decided to keep track of the effects of VIQ by retaining the VIQ testing in the main study.

Instrument for Measuring Warmth Towards Infant (WTI) and Warmth Towards Child (WTC)

In 1957, Sears et al. conducted a study in which 379 mothers of kindergarten age children were questioned about their child-rearing practices. Aspects of the mother's behavior that were considered to be most influential in the child's development were selected as the main dimensions for study. "Warmth" was one such dimension. Sears et al. defined warmth as" ... a pervasive quality [which] involves love, acceptance, enthusiasm, an outgoingness of affection" (Sears et al., 1957, pp. 30-31). These investigators conceptualized the warmth dimension as containing two related ($r = .36$, $p < .01$) scales--mother's warmth towards her infant and mother's warmth towards her child. Their subdividing the warmth dimension stemmed from the assumption that a mother's feelings towards her infant could change greatly when that infant began to grow. Sears et al., wrote: "By the time a child is 5 years old he has developed very much a personality of his own; his mother's feelings towards him are based not only on the original attitude she had towards babies, but in part on his qualities as an individual" (Sears et al., 1957, p. 31).

In the Sears et al, study, judgements of mother's warmth were mainly derived from mother's answers to questions concerning her relationship with her infant and child. In developing the present warmth interview, 8 questions whose answers contributed the greatest loading to the warmth dimension in the Sears *et al*. study were used to measure warmth. Two additional questions, one to measure the mother's perception of empathic communication between herself and her infant, and the other to measure the mother's perception of empathic communication between herself and her 8-year-old child, were developed by the present investigator and included in the warmth interview. Thus, a total of 10 questions--5 concerning warmth towards infant (WTI) and 5 concerning warmth towards child (WTC)--comprised the warmth interview of the pilot study. These questions and their rating scales can be found in Appendix I. (The rating scales were developed by the present investigator.)

Several considerations led to the selection of the Sears *et al*. method for measuring maternal warmth:

1. The Sears *et al*. interview questions were neither completely open-ended and unstructured nor totally rigid. There was enough uniformity in the questions to give judges a common base from which to make their ratings. However, there was also flexibility in the interview. Mothers responded to questions in their own words; they were not forced to choose from a list of responses. This helped uncover individualistic aspects of the mother-child relationship.

2. Some investigators charge that the responses a mother makes to inquiries into her child-rearing practices may not be consonant with her actual behaviors (Read, 1945). A social desirability factor (wanting to put oneself in a favorable light) may reduce the accuracy of the mother's answers (Yarrow, Campbell, and Burton, 1968). However, these problems were taken into account by Sears *et al*. when they worded their questions. The techniques they used to help minimize the social desirability factor in mother's responses were as follows:

> 1. (Face saving) "Do you ever find time to play with Johnny just for your own pleasure?" (instead of "Do you ever play....")
>
> 2. (Assuming the existence of negatively valued behavior) "In what ways do you get on each other's nerves?" (instead of "Do you ever get on each other's nerves?")
>
> 3. (Making a wide range of answers appear socially acceptable) "Some people feel it's very important for a child to learn not to fight with other children, and other people feel there are times when a child has to learn to fight. How do you feel about this?"
>
> 4. (Pitting two stereotypes - values - against each other) "Do you keep track of exactly where Johnny is and what he is doing most of the time, or can you let him watch out for himself quite a bit?" (Here the value of being a careful mother, who protects her child from danger, is pitted against the value of training a child to be independent) (Sears *et al*., 1957, p. 21).

While the social desirability factor may still have affected mothers' responses, at least measures were taken to minimize its chances of occurring.

Sears *et al*. conducted their study nearly 20 years ago. Obviously, child-rearing practices and beliefs have undergone changes in 20 years. Would modern-day mothers find the Sears *et al*. questions relevant and appropriate? Would these same questions still separate mothers into high-warm and low-warm groups? Would the interview still achieve internal consistency, and the ratings, interjudge reliability? In an effort to answer these questions, seven mothers of third-grade girls were interviewed. The mothers were initially contacted by telephone, and asked if they were interested in participating in the interview (the interview was described as "a survey of mothers' opinions and beliefs about child-rearing"). Seven out of the first seven mothers called agreed to participate. The interview took place at the mothers' homes. Mothers were asked to respond to the 10 warmth questions. Their comments were tape-recorded (with their permission), transcribed, and scored by two independent judges. WTI scores (questions 1 to 5) have a possible range of 5 to 35 points, as do WTC scores (questions 6 to 10). The distributions of WTI and WTC scores achieved ranges of 9 to 31 and 12 to 33, respectively. The mean scores were 23.28, WTI and 22.85, WTC; standard deviations were 8.41, WTI and 8.21, WTC. Although the distributions were both negatively skewed, two distinct groups of high-warm and low-warm mothers could be determined from the data. None of the mothers reacted unfavorably to the interview. Most indicated it was "fun" or "interesting" to think about these kinds of questions. When asked if the questions had seemed relevant and sensible, all of the mothers responded affirmatively.

The internal consistency of the warmth interview and the interjudge reliability of the ratings could not be ascertained because of the small number of subjects involved. Therefore, the part-whole correlations for the warmth questions and the interjudge reliability coefficient for the scoring system would have to be determined in the main study.

Development of Questionnaire for Obtaining Descriptive Data from Mothers and for Measuring Mothers' Valuing of Empathy

Following the warmth interview, mothers were asked to fill out a four-page biographical questionnaire. Questions referring to dates of separation from the child, ages of other children in the family, presence or absence of the father, family's religious affiliation(s), occupation and income of both parents, and mother's valuing of empathy (hereafter referred to as VOE) were asked (see Appendix J). Mothers had no objections to answering the questions and found difficulty in answering only one section (VOE questions).

The initial instrument designed for measuring VOE consisted of three questions (8, 9, and 10) at the end of the biographical questionnaire. These VOE questions required the mother to rate (a) the importance of schoolwork, (b) the importance of social sensitivity, and then to compare the two. Five of the seven mothers said it was "impossible" to make such a comparison and ended up describing school achievement and social sensitivity as "equal" in importance. A new method for measuring VOE was designed. Kohn (1959) used interview data to compile a list of characteristics that working- and middle-class mothers considered most desirable in 10- to 11-year-old girls. The five qualities that fell in the middle range of desirability (in both socioeconomic classes), plus a sixth quality that did not appear on Kohn's list, were combined into 15 paired comparisons. The sixth quality was empathy--presented as the ability to "understand the feelings of others." (It should be noted that a quality that seemed closely related to empathy--"that she is considerate of others"--did appear on Kohn's list; this quality achieved a middle range of desirability among working-class mothers and a high range of desirability among middle-class mothers.) Mothers were asked to chose the quality in each pair that they would consider more important in a 7- to 9-year-old girl (see Appendix K). VOE score was determined by counting the number of times that mothers chose "understanding the feelings of others" as the more important quality. This quality appeared in five of the fifteen pairs. The VOE score was thus described as a fraction that ranged from 0/5 (never chose "understanding the feelings of others") to 5/5 (chose "understanding the feelings of others" every time it appeared). The same seven mothers who answered the original VOE questions were administered the revised VOE instrument. Although the revised VOE scores did not achieve great variability (five of the seven mothers scored 4/5 or 5/5), mothers did consider the task reasonable and their answers "probably accurate." It was thus decided to incorporate the revised VOE test into the main study.

Integration of Hypotheses to be Investigated

From the entire preceding discussion, the following major experimental hypotheses can be drawn concerning the relationship of mother's WTI, mother's WTC, and mother's VOE to the development of empathy and SOA in the child: (In all hypotheses, the terms "children" and "child" will refer to female children.)

1. WTI should make a difference in the child's ability to empathize; mothers who are high in WTI should have daughters who are more empathic than daughters of mothers low in WTI.

2. WTC should make a difference in the child's ability to empathize; mothers who are high in WTC should

have daughters who are more empathic than daughters of mothers low in WTC.

3. Feeling SOA should be positively related to empathic ability.

4. WTI should make a difference in the child's SOA; mothers who are high in WTI should have daughters with higher feeling (vs. factual) SOA than daughters of mothers low in WTI.

5. WTC should make a difference in the child's SOA; mothers who are high in WTC should have daughters with higher feeling (vs. factual) SOA than daughters of mothers low in WTC.

6. WTI and WTC should be positively related.

7. Combined warmth (combined WTI and WTC scores--hereafter referred to as CW) should make a difference in the child's ability to empathize; mothers who are high in CW should have daughters who are more empathic than daughters of mothers low in CW.

8. CW should make a difference in the child's SOA; mothers who are high in CW should have daughters with higher feeling (vs. factual) SOA than daughters of mothers low in CW.

9. VOE should make a difference in the child's ability to empathize; mothers who are high in VOE should have daughters who are more empathic than daughters of mothers low in VOE.

10. VOE should make a difference in the child's SOA; mothers who are high in VOE should have daughters with higher feeling (vs. factual) SOA than daughters of mothers low in VOE.

The following minor experimental hypotheses can be drawn concerning the relationship of descriptive characteristics of the child's family to the development of empathy and SOA:

11. Child's ordinal position in the family should make a difference in the child's ability to empathize. (In view of the inconsistent findings that have been reported in this area, the direction of difference is not predicted.)

12. Child's ordinal position should make a difference in the child's SOA. (Again, in view of previous findings, no direction of difference is predicted.)

13. Family's religious affiliation should make a difference in the child's ability to empathize. (Direction of difference is not predicted because of the paucity of data in this area.)

14. Family's religious affiliation should make a difference in the child's SOA. (Again, no direction of difference is predicted.)

15. Socioeconomic class should make a difference in the child's ability to empathize; children of middle

and upper-middle socioeconomic class families should be more empathic than children of lower and upper-lower socioeconomic class families.

16. Socioeconomic class should make a difference in the child's SOA; children of middle and upper-middle socioeconomic class families should be higher in feeling (vs. factual) SOA than children of lower and upper-lower socioeconomic class families.

17. Amount of separation from the mother should make a difference in the child's ability to empathize; daughters who have not been separated from their mothers for a prolonged period (over 2 months) should be more empathic than daughters who have been separated from their mothers for a prolonged period of time.

18. Amount of separation from the mother should make a difference in the child's SOA; daughters who have not been separated from their mothers for a prolonged period (again, over 2 months) should have higher feeling (vs. factual) SOA than daughters who have been separated from their mothers for a prolonged period of time.

19. Presence or absence of the father should make a difference in the child's ability to empathize. (Since the effect of father's absence seems to be to increase mother's influence, this presence/absence variable would have to be tested in conjunction with mother's warmth. No direction of difference is predicted.)

20. Presence or absence of the father should make a difference in the child's SOA. (Again, no direction of difference is predicted.)

The following control hypotheses can be drawn concerning the relationship of Verbal Intelligence to SOA and empathic ability:

21. There should be no significant relationship between Verbal Intelligence and SOA.

22. There should be no significant relationship between Verbal Intelligence and empathic ability.

The following test construction hypotheses can be drawn concerning the internal consistency of the warmth interview and the reliability of the warmth interview scoring system:

23. The five WTI questions should be significantly and positively correlated with total WTI score; the five WTC questions should be significantly and positively correlated with total WTC score.

24. There should be a significant and positive correlation between the warmth scores assigned by two independent judges.

CHAPTER II

METHOD

Subjects

Seventy 8- to 9-year-old third-grade girls and their 70 mothers were the subjects in the main study. These participants were all from Shore, the same suburban New England community selected for the pilot work sample. (See pilot work for a discussion of how selections of community and experimental groups were made.) The children were in attendance at four public elementary schools, located in high (one school), low (one school), and middle (two schools) income areas of Shore. The subjects were all Caucasian and were of different religious affiliations (70% Catholic, 12% Protestant, 10% Jewish, and 8% not known). The children varied in their ordinal positions in the family (36% first- and only-born, 33% middle-born, and 31% last-born). All of the children had been living with their mothers since the first month of life; any child who was not living with her current mother before the age of 1 month was not included in the study. Approval from Shore's Superintendent of Schools and parental consent were needed in order to test the schoolchildren. (A copy of the parent permission form can be found in Appendix L.)

One hundred and thirty-four permission forms were sent home to mothers. Of these, 79 mothers (59%) consented to participate, 33 mothers (24.6%) refused, and 22 mothers (16.4%) never returned their forms. Acceptances, refusals, and no-returns were fairly evenly distributed among the different socioeconomic districts. One child was eliminated from the study because she was intellectually incapable of completing the experimental task. Eight mothers were eliminated from the study for the following reasons: Five mothers had adopted their daughters after the age of 1 month, one mother could not speak English, one mother refused to be interviewed, saying she "thought the permission form was for something else," and one mother was inebriated and illogical during the interview. Thus, 70 mothers and daughters were included in the study proper.

Procedure

All tests and procedures administered to children and mothers were the same as those developed in the pilot work. The SOA and VOE tests in the main study were described in the pilot work as the "revised" SOA and VOE tests.

Procedure to Control for Experimenter Bias

All 70 children were tested first and then their 70 mothers were interviewed. Since the same investigator worked with both groups of subjects, precautions had to be taken against experimenter bias. Before testing was begun, an independent worker listed all participating children by first name and last initial; the investigator therefore did not know the children by last name. The independent worker also listed each participating mother by last name, and included the first name of each mother's daughter. Thus, when mothers were interviewed 2 months after their daughters were tested, the investigator did not know which daughter belonged with which mother.

Procedure for Children

Third-grade teachers of participating girls prepared the children for testing by announcing that a visitor was coming to school to play some games with them. The children were tested individually in a specially designated room in the school. Each girl was administered the following tests (in this order):

1. SOA test--Children were shown the 10 Sarbin Stick Figures (numbers 14, 19, 15, 18, 20, 27, 38, 43, 45, and 46) and asked to "tell about the person in the picture ...." (See pp. 25 to 27 and Appendix B for a description of the development, content, and scoring of this test.)

2. Empathy test--The seven TED cards (numbers 8, 9, 2, 1, 7, 6, and 11 of the female latency age series) and accompanying stories were presented to each child. On the first six cards, the child was asked to "tell about how the people in the picture are thinking and feeling"; on the seventh card (number 11), she was asked to describe what the people were wearing. (See pp. 27 to 32 and Appendices C and D for a description of the development, content, and scoring of this test.)

3. If the child was unable to reach a criterion level (7 points) on the empathy test, she was administered the T-F procedure. (Children who scored less than 3 points on the empathy test, regardless of performance on the T-F procedure, were eliminated from the study. Children who scored between 3 and 6 points on the empathy test were included in the study if they responded appropriately to two or more thinking and/or feeling exercises, and eliminated if they did not respond appropriately to at least two thinking and/or feeling exercises.) (The T-F procedure is described on pp. 31 to 32 and in Appendix E.)

4. Verbal IQ test--All subjects were given two Verbal subtests, Comprehension and Vocabulary, of the WISC. (The rationale for administering these subtests is explained on p. 36.)

Procedure for Mothers

All mothers who agreed on their parent permission forms to participate in the study were contacted by telephone. The investigator (who was also the interviewer) further described the study; mothers' questions were answered. Arrangements were then made for the interviewer to meet with each mother at her home. (Mothers were given the option to be interviewed at one of the schools; none chose this option.) The interviews all began with some informal conversation aimed at helping the mother become comfortable with the interviewer (and vice versa). Mothers were asked if they objected to having the interviews tape-recorded. None objected. The interviewer then proceeded with the warmth interview, asking mothers the 5 WTI questions and the 5 WTC questions (see pp. 37 to 41 and Appendix I for a description of the development, content, and scoring of the warmth questions). Following the warmth interview, mothers were asked to fill out a four-page biographical questionnaire, two pages of which contained the (revised) VOE questions (See pp. 41 to 43 and Appendix K for a description of the biographical questionnaire, including the revised VOE questions.)

CHAPTER III

RESULTS

Evaluation of Control Hypotheses and Application of Control Procedures

Hypotheses 21 and 22 were tested first in order to determine the need to control for VIQ effects in the other analyses.

Hypothesis 21 states that there should be no significant relationship between Verbal Intelligence and SOA.

The correlation between Verbal Intelligence and SOA was nonsignificant, r (68) = .18, $p > .05$.

Hypothesis 22 states that there should be no significant relationship between Verbal Intelligence and empathic ability.

The correlation between Verbal Intelligence and empathic ability was significant, r (68) = .28, $p < .01$.

Control Procedures

The small but significant correlation between empathic ability and VIQ necessitated that VIQ be considered and in some way controlled. Since a basic definition in this study was that empathic ability involved cognitive as well as affective processes, it was decided to control for VIQ by studying its interactions with the independent variables. (In other words, it was closest to this study's assumptions about conditions in nature to not eliminate the effects of VIQ but to study the interactional effects of VIQ.) Interactional effects were tested only in analyses indicating significance of the independent variable. (If an independent variable had no effect on empathic ability, there was no rationale for investigating the interaction between that independent variable and VIQ). Hypotheses 1, 2, 7, 9, 11, 13, 15, 17, and 19 involved WTI, WTC, CW, VOE, birth order, religion, socioeconomic class, separation from mother, and presence/absence of father as the independent variables, respectively, and empathic ability as the dependent variable. When any of these hypotheses proved a significant effect of the independent variable, that hypothesis was extended to a two-way analysis of variance with VIQ as one of the independent variables and empathic ability as the dependent variable. Results of the two-way analyses of variance were used to determine the interaction of VIQ with the influential independent variable.

Since VIQ and SOA were not significantly related, none of the hypotheses involving SOA as the dependent variable (Hypotheses 4, 5, 8, 10, 12, 14, 16, 18, and 20) were tested for interaction effects by a two-way analysis of variance.

Hypothesis 3, which involved both empathic ability and SOA, was tested by the Pearson product-moment and partial correlation methods; the latter correlation procedure was conducted to determine how much influence VIQ had in the total correlation coefficient.

Evaluation of Major Hypotheses

In order to test Hypotheses 1 to 10, mothers' WTI, WTC, CW, and VOE scores and children's VIQ scores were categorized into the following groups:

1. WTI scores--high WTI (highest 26% of WTI scores, n = 18, included scores 28 through 32); medium WTI (middle 50% of WTI scores, n = 35, included scores 21 through 27); low WTI (lowest 24% of WTI scores, n = 17, included scores 12 through 20).

2. WTC scores--high WTC (highest 23% of WTC scores, n = 16, included scores 29 through 33); medium WTC (middle 50% of WTC scores, n = 35, included scores 22 through 28); low WTC (lowest 27% of WTC scores, n = 19, included scores 13 through 21).

3. CW scores--high CW (highest 26% of CW scores, n = 18, included scores 55 through 63); medium CW (middle 51% of CW scores, n = 36, included scores 41 through 54); low CW (lowest 23% of CW scores, n = 16, included scores 27 through 40).

4. VOE scores--high VOE (mothers scoring 4/5 or 5/5, n = 58); medium/low VOE (mothers scoring 0/5, 1/5, 2/5, or 3/5, n = 12).

5. VIQ scores--high VIQ (scores 110 through 138, included highest 21.5% of VIQ scores, n = 15); medium VIQ (scores 90 through 109, included middle 60% of VIQ scores, n = 42); low VIQ (scores 69 through 89, included lowest 18.5% of VIQ scores, n = 13).

The originally planned division for the warmth scores was high = 25%, medium = 50%, and low = 25% (based on the work of Kelly, 1939, whose experimental calculations suggested that the optimal distance for separating high and low groups of test items was between 25 to 27 percent at either end). Category percentages had to deviate slightly from this ideal in order to prevent placing identical scores into two different groups.

The division of VOE scores was originally planned to include three groups; mothers scoring 4/5 and 5/5 were intended to comprise the high group, mothers scoring 3/5, the medium group, and mothers scoring 0/5, 1/5, and 2/5, the low group. Scores were so negatively skewed, however, that medium and low groups had to be combined.

The VIQ scores were divided into high, medium, and low groups on the basis of Wechsler's (1949) system of Intelligence classifications. The scores that Wechsler categorized as "average" (scores 90 through 109) comprised this study's medium group. Children who scored above or below average were placed in the high or low groups, respectively.

The ranges, means, and standard deviations of WTI, WTC, CW, SOA, empathy, and VIQ scores, and the frequency distribution of VOE scores are presented in Tables 2 and 3, respectively. It should be noted that one child scored only 2 points on the empathy test, and therefore had to be eliminated from the study. This child was never included as one of the 70 subjects.

The terms "children" and "child", as used in this section, will refer to female children.

Hypothesis 1 states that WTI should make a difference in the child's ability to empathize; mothers who are high in WTI should have daughters who are more empathic than daughters of mothers low in WTI.

A one-way analysis of variance, weighted for unequal cell numbers (hereafter referred to as a 1-way Anova) was conducted. Results indicated that there was a significant WTI effect as related to child's empathic ability, $\underline{F}$ (2, 67) = 6.45, $p < .01$. A significant difference between high and low WTI means was found in the predicted direction using the Newman-Keuls procedure, $\underline{q}$ (67) = 5.81, $p < .01$. (A significant difference was also found between medium and low groups, with medium being the higher, $\underline{q}$ (67) = 3.27, $p < .05$.)

In order to test for an interaction effect between VIQ and WTI, a two-way analysis of variance, weighted

Table 2

Ranges, Means, and Standard Deviations of WTI, WTC, CW, SOA, Empathy, and VIQ Scores

Measure	Possible Range	Actual Range	Mean	Standard Deviation
WTI	5 to 35	12 to 32	23.56	5.00
WTC	5 to 35	13 to 33	24.16	4.87
CW	10 to 70	27 to 63	47.90	8.47
SOA	10 to 40	12 to 39	25.33	5.69
Empathy	3 to 26+	5 to 27	19.54	5.16
VIQ	45 to 155+	69 to 138	98.72	13.52

Table 3

Frequency Distribution of VOE Scores

VOE Score	Frequency
0/5	1
1/5	0
2/5	3
3/5	8
4/5	31
5/5	27

for unequal cell numbers (hereafter referred to as a 2-way Anova), with VIQ and WTI as the independent variables and empathic ability as the dependent variable, was conducted. Results indicated no significant interaction effect between VIQ and WTI, F (2, 67) = 2.25, $p > .05$. As an auxiliary result (Auxiliary Result A) one found a tendency, although not to a significant level, for a main effect of VIQ as related to empathic ability, F (2, 67) = 2.73, $p < .10$.[1]

Hypothesis 2 states that WTC should make a difference in the child's ability to empathize; mothers who are high in WTC should have daughters who are more empathic than daughters of mothers low in WTC.

Results of a 1-way Anova indicated that there was a significant WTC effect as related to child's empathic ability, F (2, 67) = 14.67, $p < .01$. A significant difference between high and low means was found in the predicted direction using the Newman-Keuls procedure, q (67) = 7.59, $p < .01$. (A significant difference was also found between medium and low groups, with medium being the higher, q (67) = 5.28, $p < .01$.

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[1] The main effects of maternal warmth as found in the 2-way Anovas will not be discussed. In all analyses (1-way and 2-way) involving maternal warmth and empathic ability, the effects of warmth were significant at the .01 level. However, the F values in the 2-way analyses were more affected by within cell error variance and therefore changed slightly from the 1-way F values. In order to avoid confusion and in order to reduce the effects of error variance, only the 1-way Anova data (in conditions involving maternal warmth and empathic ability) will be reported.

In order to test for an interaction effect between VIQ and WTC, a 2-way Anova, with VIQ and WTC as the independent variables and empathic ability as the dependent variable, was conducted. Results indicated no significant interaction effect between VIQ and WTC, F (2, 67) = 1.02, $p > .05$. As an auxiliary result (Auxiliary Result B) one found a significant main effect for VIQ as related to empathic ability, F (2, 67) = 4.11, $p < .05$.

Hypothesis 3 states that feeling SOA should be positively related to empathic ability.

The Pearson product-moment correlation coefficient (hereafter referred to as correlation) between child's feeling SOA and empathic ability was positive and significant, r (68) = .49, $p < .01$.

The partial correlation between child's feeling SOA and empathic ability, with VIQ controlled, was also positive and significant, r (68) = .47, $p < .01$.

Hypothesis 4 states that WTI should make a difference in the child's SOA; mothers who are high in WTI should have daughters with higher feeling (vs. factual) SOA than daughters of mothers low in WTI.

Results of a 1-way Anova indicated a tendency, although not to a significant level, for a WTI effect as related to child's SOA, $\underline{F}$ (2, 67) = 3.05, $p < .10$.

Hypothesis 5 states that WTC should make a difference in the child's SOA; mothers who are high in WTC should have daughters with higher feeling (vs. factual) SOA than daughters of mothers low in WTC.

Results of a 1-way Anova indicated that there was a significant WTC effect as related to child's SOA, $\underline{F}$ (2, 67) = 7.77, $p < .01$. The Newman-Keuls procedure indicated a significant difference in the predicted direction between high and low means, $\underline{q}$ (67) = 6.82, $p < .01$. (A significant difference was also found between medium and low groups, with medium being the higher, $\underline{q}$ (67) = 4.34, $p < .05$.)

Hypothesis 6 states that WTI and WTC should be positively related.

The correlation between WTI and WTC was positive and significant, $\underline{r}$ (68) = .49, $p < .01$.

Hypothesis 7 states that combined warmth (CW) should make a difference in the child's ability to empathize; mothers who are high in CW should have daughters who are more empathic than daughters of mothers low in CW.

Results of a 1-way Anova indicated that there was a significant CW effect as related to child's empathic ability, *F* (2, 67) = 16.72, $p < .01$. The Newman-Keuls procedure indicated a significant difference in the predicted direction between high and low means, *q* (67) = 8.46, $p < .01$. (Significant differences were also found between medium and low groups, with medium being the higher, *q* (67) = 3.99, $p < .05$, and high and medium groups, with high being the higher, *q* (67) = 4.47, $p < .05$.)

In order to test for the interaction effect between VIQ and CW, a 2-way Anova, with VIQ and CW as the independent variables and empathic ability as the dependent variable, was conducted. Results indicated no interaction effect between VIQ and CW, *F* (2, 67) = 1.68, $p > .05$. As an auxiliary result (Auxiliary Result C), one found a significant main effect for VIQ as related to empathic ability, *F* (2, 67) = 3.38, $p < .05$.[2]

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[2] It should be noted that the *F* value of the main effect of VIQ as related to empathic ability changed slightly in the WTI, WTC, and CW conditions (*F* [2, 67] = 2.73, 4.11, and 3.38, respectively). These changes represent the influence of different within cell error variances. When the main effect of VIQ was tested in a 1-way Anova (and hence, error variance was reduced), the *F* value (2, 67) was 3.68, $p < .05$. The Newman-Keuls *q* values (67) between high and medium and high and low groups were 4.02, $p < .05$, and 3.44, $p < .05$, respectively. In both cases, the direction of difference was positive (the high VIQ group had significantly higher empathy scores than the medium and low VIQ groups). From this point on, when the main effects of VIQ as related to empathic ability are discussed, one will be referring to the 1-way rather than the 2-way Anova data.

Hypothesis 8 states that CW should make a difference in the child's SOA; mothers who are high in CW should have daughters with higher feeling (vs. factual) SOA than daughters of mothers low in CW.

Results of a 1-way Anova indicated that there was a significant CW effect as related to child's SOA, F (2, 67) = 11.22, $p < .01$. The Newman-Keuls procedure indicated a significant difference in the predicted direction between high and low means, q (67) = 8.08, $p < .01$. (Significant differences were also found between medium and low groups, with medium being higher, q (67) = 3.19, $p < .05$, and between high and medium groups with high being the higher, q (67) = 4.88, $p < .01$.)

Hypothesis 9 states that VOE should make a difference in the child's ability to empathize; mothers who are high in VOE should have daughters who are more empathic than daughters of mothers low in VOE.

This hypothesis was not supported by statistical analysis. A t-test conducted between high and medium/low VOE groups indicated no significant difference between groups in children's empathic ability scores, t (68) = -0.2, $p > .05$.

Hypothesis 10 states that VOE should make a difference in the child's SOA; mothers who are high in VOE should have children with higher feeling (vs. factual) SOA than daughters of mothers low in VOE.

This hypothesis was not supported by statistical analysis. A t-test conducted between high and medium/low groups indicated no significant difference between groups in children's SOA scores, t (68) = 0.05, $p > .05$.

Evaluation of Minor Hypotheses (Hypotheses 11 to 20)

In order to test hypotheses 11 and 12, subjects were divided into the following three groups: first- and only-born ($n = 25$), middle-born ($n = 23$), and last-born ($n = 22$).

In order to test hypotheses 13 and 14, subjects were again divided into three groups: Catholic ($n = 49$), Protestant ($n = 8$), and Jewish ($n = 7$). If parents differed in religious affiliation, the religious affiliation of the child was considered the family's religious affiliation. Six mothers did not indicate religious affiliation on their questionnaires and thus were not included in the statistical analyses of these two hypotheses.

In order to test Hypotheses 15 and 16, subjects were divided into the following five socioeconomic groups: upper ($n = 5$), upper-middle ($n = 12$), lower-middle ($n = 18$), upper-lower ($n = 14$), and lower ($n = 8$). These groups were determined by combining two scores, one based on occupation and the other on income. First, a score was assigned to the main wage earner according to a scale of occupational status, with 1 point given for the most prestigious occupations (doctor, lawyer, executive, etc.) and 7 points given for the least prestigious occupations (migrant worker). This scale was based on a scale developed by Warner, Meeker, and Eells (1949). The family was then assigned a score based on income, with 1 point given for the highest income group ($41,000 to $50,000) and 7 points given for the lowest income group ($1,000 to $5,000). The occupational score was given a weight of 2, the income score given a weight of 1, and the two were combined to produce a socioeconomic status (SES) score. (The weighting and combining procedure was based on the work of Sears, Maccoby, and Levin, 1957.) Subjects' SES scores were then used to place them into one of the five socioeconomic class categories. Thirteen mothers did not indicate family income on their questionnaires and thus were not included in the statistical analyses of Hypotheses 15 and 16.

Hypothesis 11 states that ordinal position in the family should make a difference in the child's ability to empathize.

Results of a 1-way Anova indicated that ordinal position did not make a significant difference in the child's ability to empathize, $F\ (2, 67) = 1.69$, $p > .05$.

Hypothesis 12 states that ordinal position in the family should make a difference in child's SOA.

Results of a 1-way Anova indicated that ordinal position did not make a significant difference in the child's SOA, F (2, 67) = 1.26, $p > .05$.

Hypothesis 13 states that family's religious affiliation should make a difference in child's ability to empathize.

Results of a 1-way Anova indicated that religious affiliation did not make a significant difference in the child's ability to empathize, F (2, 61) = 0.34, $p > .05$.

Hypothesis 14 states that family's religious affiliation should make a difference in the child's SOA.

Results of a 1-way Anova indicated that religious affiliation did not make a significant difference in the child's SOA, F (2, 61) = 0.34, $p > .05$.

Hypothesis 15 states that socioeconomic class should make a difference in the child's ability to empathize; children of middle and upper-middle socioeconomic class families should be more empathic than children of lower and upper-lower socioeconomic class families.

Results of a 1-way Anova indicated that socioeconomic class did not make a significant difference in the child's ability to empathize, F(4, 52) = 0.21, $p > .05$.

Hypothesis 16 states that socioeconomic class should make a difference in the child's SOA; children of middle and upper-middle socioeconomic class families should be higher in feeling (vs. factual) SOA than children of lower and upper-lower socioeconomic class families.

Results of a 1-way Anova indicated that socioeconomic class did not make a significant difference in the child's SOA, F (4, 52) = 0.87, $p > .05$.

Hypotheses 17 and 18 state that amount of separation from the mother should make a difference in the child's ability to empathize and in the child's SOA; daughters who have not been separated from their mothers for a prolonged period (over 2 months) should be more empathic and higher in feeling (vs. factual) SOA than daughters who have been separated from their mothers for a prolonged period of time.

These hypotheses could not be tested because no mother indicated having been separated from her child for a prolonged period of time.

Hypotheses 19 and 20 state that presence or absence of the father should make a difference in the child's ability to empathize and in the child's SOA.

These hypotheses could not be tested. On the biographical questionnaires, eleven mothers indicated the absence of the child's father in the home. Two fathers were never in the home (and were unknown); two fathers left because of divorce when the participating girls were under age 3; three fathers left because of divorce when the participating girls were between ages 4 and 7; two fathers left, one because of divorce and one because of death, within the last ten months; two mothers did not indicate length of father's absence. The time periods and circumstances surrounding the fathers' absences were so varied that presence/absence could not be conceptualized as a simple, dichotomous factor. It would have been unsound, for example, to have considered an unknown father and a recently deceased father as having had similar effects upon their children. Thus, one would have to group fathers according to the time periods and circumstances surrounding their absences. The number of absent fathers in the present study was too small for statistical analyses of distinct absent-father groups.

Evaluation of Test Construction Hypotheses (Hypotheses 23 and 24)

Hypothesis 23 states that the five WTI questions should be significantly and positively correlated with total WTI score; the five WTC questions should be significantly and positively correlated with total WTC score.

Internal consistency of the warmth interview questions was supported by results of ten part-whole correlation tests. The five WTI questions were all found to be positively and significantly (at the .001 level) correlated with total WTI; the five WTC questions were all found to be positively and significantly (at the .001 level, with the exception of question 10 at the .01 level) correlated with total WTC. The specific correlations of the questions to their respective WTI/WTC indexes can be found in Table 4.

Hypothesis 24 states that there should be a significant and positive correlation between the warmth scores assigned by two independent judges.

The correlation between the original ratings of the two independent judges was .88, $p < .01$, indicating significantly high interjudge reliability. (Each judge scored the WTI and WTC questions independently. If the judges disagreed on the scoring of a response, the response was discussed until the judges reached agreement. "Original ratings" refers to the ratings made before discussion and compromise.)

Additional Analyses

A posteriori to the main analyses (analyses testing Hypotheses 1 through 24), six additional 1-way Anova tests were conducted. These additional analyses tested the effects of birth order as related to WTI and WTC, religious affiliation as related to WTI and WTC, and socioeconomic class as related to WTI and WTC. Results were as follows:

Additional Finding A-- There was a significant birth order effect as related to WTI, $F\ (2, 67) = 4.68$, $p < .05$. Mothers expressed significantly more warmth towards

Table 4

Testing Internal Consistency: Corelations of
WTI and WTC Questions with
Total WTI and WTC Indexes

	Index	
Question	WTI	WTC
1	.56**	.22*
2	.65**	.48**
3	.71**	.31**
4	.51**	.22*
5	.58**	.18
6	.34**	.78**
7	.39**	.72**
8	.25*	.54**
9	.24*	.58**
10	.15	.27*

$^{*}p < .05$

$^{**}p < .01$

last-born than towards first- and only-born infants; the difference between last-born and first- and only-born means, using the Newman-Keuls procedure, achieved a _q_ value (67) of 4.25, $p < .05$. Being a middle-born infant made no significant difference in WTI.

Additional Finding B-- There was a significant birth order effect as related to WTC, _F_ (2, 67) = 3.32, $p < .05$. Mothers expressed significantly more warmth towards last-born than towards first- and only-born children; the difference between last-born and first- and only-born means, using the Newman-Keuls procedure, achieved a _q_ value (67) of 3.72, $p < .05$. Being a middle-born child made no significant difference in WTC.

Additional Finding C-- Religious affiliation did not make a significant difference in WTI, _F_ (2, 61) = 0.35, $p > .05$.

Additional Finding D-- Religious affiliation did not make a significant difference in WTC, _F_ (2, 61) = 2.12, $p > .05$.

Additional Finding E-- Socioeconomic class did not make a significant difference in WTI, _F_ (4, 52) = 0.98, $p > .05$.

Additional Finding F-- Socioeconomic class did not make a significant difference in WTC, _F_ (4, 52) = 0.05, $p > .05$.

Summary

A summary of all significant findings can be found in Table 5.

Table 5

Summary of Significant Findings

Hypotheses Number (and description)	Statistic(s) Used	df	F	q Value (between high and low means)	r
1. (WTI and empathic ability)	1-way Anova and Newman-Keuls	2,67 67	6.45**	5.81**	NA
2. (WTC and empathic ability)	1-way Anova and Newman-Keuls	2,67 67	7.59**	5.28**	NA
3. (SOA and empathic ability)	Pearson Correlation	68	NA	NA	.49**
4. (WTI and SOA)	1-way Anova	2,67	3.05	NA	NA
5. (WTC and SOA)	1-way Anova and Newman-Keuls	2,67 67	7.77**	6.82**	NA
6. (WTI and WTC)	Pearson Correlation	68	NA	NA	.49**
7. (CW and empathic ability)	1-way Anova and Newman-Keuls	2,67 67	16.72**	8.46**	NA
8. (CW and SOA)	1-way Anova and Newman-Keuls	2,67 67	11.22**	8.08**	NA
18. (VIQ and empathic ability)	Pearson Correlation	68	NA	NA	.28**
Auxiliary Result D. (VIQ and empathic ability)	1-way Anova and Newman-Keuls	2,67 67	3.38*	3.44*	NA
Additional Finding A. (birth order and WTI)	1-way Anova and Newman-Keuls	2,67 67	4.68*	4.25*	NA
Additional Finding B. (birth order and WTC)	1-way Anova and Newman-Keuls	2,67 67	3.32*	3.72*	NA

*p <.05 **p < .01 Note NA = not applicable

CHAPTER IV

DISCUSSION

Results of the main study indicate that all major hypotheses proposing significant maternal warmth effects as related to the development of empathy and feeling SOA in the child were supported by the data. Thus, mothers who were high in WTI did have daughters who were significantly more empathic than daughters of mothers who were low in WTI; concomitantly, there was a tendency, although not to a significant level ($p < .10$) for mothers high in WTI to have daughters higher in feeling (vs. factual) SOA than daughters of mothers low in WTI. Daughters of mothers high in WTC were significantly more empathic and more feeling in SOA than were daughters of mothers low in WTC. Finally, daughters of mothers high in both WTI and WTC (CW) were significantly more empathic and more feeling in SOA than were daughters of mothers low in CW.

Direct and exclusive causality can not be concluded from these data. Prior to this study's testing, each participating child had experienced 8 years of living; included in these 8 years were experiences linked with mother and experiences not related to mother. Obviously, any and all of these life experiences could have contributed to (or detracted from) the child's development of empathy and SOA. Thus, one can not claim that maternal warmth (or lack of it) directly and exclusively causes high (or low) empathic ability and high (or low) feeling SOA. However, if one accepts a basic premise of this study, namely that maternal behavior is a key factor in the child's development, then the most logical interpretation of the data is as follows: maternal warmth, both towards the infant and the child, significantly and positively affects the development of empathy and SOA in the child.

The data, thus interpreted, offer credence to both the psychoanalytic and social learning approaches to empathy. In the analytic framework, empathy was described as emerging from the nonverbal flow of communication between mother and infant. Infants of nurturant mothers (mothers who transmitted warmth and acceptance to their infants) were expected to develop a more empathic mode of communication and higher feeling SOA than infants of less nurturant mothers. These expectations were borne out by the present findings that daughters of mothers high in WTI were more empathic and higher in feeling SOA than daughters of mothers low in WTI. According to social learning theory, empathy is learned behavior, developing primarily from the child's imitation of the nurturant, same-sex parent. Daughters of nurturant mothers (mothers who expressed warmth and acceptance to their 8-year-olds) were expected to be more empathic and higher in feeling SOA than daughters of less nurturant mothers. These hypotheses were supported by the data that daughters of mothers high in WTC were more empathic and higher in feeling SOA than daughters of mothers low in WTC.

WTI and WTC were positively and significantly related to each other, $\underline{r}$ (68) = .49, $p < .01$. Since each of these two related variables appeared to have a significant and positive influence in the development of empathy and feeling SOA, it was expected that daughters of mothers high in CW would be more empathic and higher in feeling SOA than daughters of mothers low in CW. These expectations were, in fact, supported by the data.

In looking at the individual effects of WTI and WTC, it is interesting to note that WTC had a stronger effect in relationship to both empathic ability and feeling SOA than did WTI. These data imply that many years of imitative learning are more influential in the development of empathy and feeling SOA than is a close mother-infant relationship. What appeared most influential in the development of empathy and feeling SOA, however, was the continuous (from infancy through childhood) expression of maternal warmth. High CW had a stronger positive effect upon child's empathic ability and feeling SOA than did either warmth dimension taken separately.

It is important to ascertain whether the strength of the CW scale emerged primarily from additive effects (two scales, each of which had significant, positive effects in relationship to empathy and feeling SOA, were being added together) or from consistency effects (being consistent or inconsistent in one's warmth towards one's offspring). In order to clarify this issue, one would have to compare discontinuous warmth (extreme changes in mother's warmth from infant to child--high WTI/low WTC or low WTI/high WTC) with continuous warmth (high WTI/high WTC or low WTI/low WTC) in their effects on empathy and SOA development. Unfortunately, (although fortunately for the children), this comparison could not be made. Too few mothers ($n = 3$) belonged to the discontinuous warmth group to allow for meaningful analysis. A replication of the present study, using a larger number of subjects, might yield the needed number of discontinuous warmth subjects to study consistency/inconsistency effects.

Based on the pilot work of the present study, it was predicted that Verbal Intelligence would not be significantly related to SOA or empathic ability. Results of the main study indicated a nonsignificant positive relationship between SOA and VIQ, $\underline{r}$ (68) = .18 $p > .05$, and a significant positive relationship between empathic ability and VIQ, $\underline{r}$ (68) = .28 $p < .01$. The major findings of this study indicated significant WTI, WTC, and CW effects as related to child's SOA and empathic ability. Since VIQ and empathic ability were significantly related, how much of the effects of maternal warmth were being influenced by VIQ? The answer is--almost none. The results of three 2-way Anova tests indicated no significant interaction effects between WTI and VIQ, WTC and VIQ, or CW and VIQ (interaction F [2, 67] = 2.25, 1.02, and 1.68, respectively; none reached the .05 level of significance). As an auxiliary result, a significant VIQ main effect was found as related to empathic ability, F (2, 67) = 3.68, $p < .05$. Again, direct and exclusive causality (i.e., that VIQ directly and exclusively causes differences in empathic ability and SOA) could not be concluded from the data. However, considering that both empathy and SOA scores were derived from children's verbal responses to verbal questions, it seems logical to interpret these data as follows: child's VIQ significantly and positively affects the child's development of empathic ability and SOA. In comparing the strength of the maternal warmth and VIQ variables, it was evident that warmth was a consistently more powerful factor upon empathic ability than was VIQ (see Table 5). Thus, in summarizing and interpreting the data concerning VIQ, maternal warmth, and empathic ability, the following statements can be made:

1. Empathic ability is significantly affected by VIQ.

2. Empathic ability is significantly affected by maternal warmth.

3. The effects of maternal warmth are consistently more powerful than the effects of VIQ (upon empathic ability).

4. The effects of the two variables (maternal warmth and VIQ) are independent of one another.

A significant and positive correlation was found between feeling SOA and empathic ability, $\underline{r}$ (68) = .49, $p < .01$. The magnitude of the correlation suggests that these are related, but different, abilities. Thus, while children high in empathic ability would tend to approach the world in a feeling manner (and similarly for low empathic ability, high factual approach), the prediction of one variable from the other is far from absolute. The separate but similar status of SOA and empathic abilities is congruent with the writings of Dymond, Hughes, and Raabe (1952) and the findings of Gilbert (1969) (see pp. 15 and 16). It is important to note that the correlation changed very little when the effects of Verbal IQ were partialed out, $\underline{r}$ (68) = .47, $p < .01$, indicating that VIQ is not an influential factor in the relationship between SOA and empathic ability.

No significant effects for VOE as related to empathic ability or SOA were found. In examining the VOE data, it appears that the VOE test was not effective. Eighty-three percent of the VOE scores fell within the high range, indicating poor discriminatory power of the test items. In effect, "understanding the feelings of others" was too desirable a quality when paired with dependability, obedience, popularity, curiosity, or academic achievement. It is difficult to determine whether mothers overwhelmingly preferred to see this "understanding" quality in their daughters, or whether "understanding the feelings of others" somehow looked like the "correct" choice. In any event, a more effective method of assessing VOE has to be developed before one can make meaningful statements about the influence of VOE on SOA and empathic ability.

Birth order did not make a significant difference in empathic ability or SOA. These findings were consistent with Gilbert's (1969) findings that among non-Jewish families, birth order was not significantly related to empathic ability. (In the present study, 63 of the 70 subjects were non-Jewish.) These findings were not consistent with the data reported by Stotland and Dunn (1963) and Stotland and Walsh (1963); both the former and latter investigators found that later-borns were significantly more empathic with people similar to themselves than were first- and only-borns. In order to further explore the effects of birth order, two additional 1-way Anova tests were conducted. The first tested the influence of birth order as related to WTI. Results indicated that birth order did make a significant difference, F (2, 67) = 4.68, p < .05, with last-borns receiving higher WTI than first- and only-borns. The difference between last-born and first- and only-born means, using the Newman-Keuls procedure, achieved a q value (67) of 4.25, p < .05. Being a middle-child made no significant difference in WTI. The second 1-way Anova test, testing influence of birth order as related to WTC, also yielded significant results, F (2, 67) = 3.32, p < .05. Last-borns received significantly higher WTC than did first- and only-borns; the difference between last-born and first- and only-born means, using the Newman-Keuls procedure, achieved a q value (67) of 3.72, p < .05. Being a middle-child made no significant difference in WTC.

The tendency of parents to behave more warmly to last-borns than to first- and only-borns has been cited in the psychological literature. Lasko (1954) found that "parent behavior toward first children as contrasted to second is on the average less warm emotionally and more restrictive and coercive" (p. 133). Sears et al. (1957) noted that first-born, kindergarten-age girls received less maternal warmth than did last-born, kindergarten-age girls.

(This was not entirely true for first-born female infants, however; first-born female infants received more maternal warmth than did last-born female infants when the latter were born into a family of all-girl children.)

Why last-borns received more maternal warmth than did first- and only-borns in the present study is not known. Probably the best ideas for speculation come from the mothers themselves. Almost 80% of the mothers who mentioned differences in mothering first- and later-born children described themselves as being more "nervous," "tense," and "uncertain" with first-borns. As one mother said, "It seems like the more children I had, the better they got, and the easier they were to take care of ... I guess that was because I was much more nervous myself with the first." A few mothers acknowledged feeling resentful at having to change their life styles when the first baby arrived. One mother described her resentment at "having to grow up so fast." She explained, "Because she [participating girl] was the first, she forced me to experience new horizons--to plunge into new situations--whether I felt ready for them or not." Another mother resented " ... all the changes between husband and wife when the first one comes along." Thus, it seems that mothers have special difficulties in adjusting to first-born children, and these difficulties might interfere with the development of maternal warmth.

Religious affiliation did not make a significant difference in empathic ability or SOA. Additionally, religious affiliation did not make a significant difference in WTI or WTC. (The two additional 1-way Anova tests [between religious affiliation and the warmth scales] were conducted, as in the birth order condition, a posteriori to the main analyses.) These findings were not surprising in view of the related findings of Kohn (1959) and Sears et al. (1957); the former found that religion played no part in mother's desire to see her daughter behave with consideration towards others; the latter discovered little relationship between religious affiliation and emotional warmth. Sears et al. did note one exception in their data, however; Jewish middle-class mothers displayed more emotional warmth towards their children than did non-Jewish middle-class mothers. In the present study, the size of the Jewish sample made it impossible to test differences between Jewish and non-Jewish middle-class mothers. There were only seven Jewish families in the study sample, and of these seven, only three could be designated as upper-middle or middle-class. It should be noted that there were also relatively few Protestant families (eight) in the sample, creating a very uneven distribution of the three religious groups. Because of this uneven distribution, caution should be exerted in interpreting all the present findings concerning noninfluence of religious affiliation.

In previous studies, socioeconomic class was found to affect the amount of parental warmth expressed towards children; specifically, upper-middle and middle-class mothers expressed more warmth towards their children than did upper-lower and lower-class mothers (Maccoby and Gibbs, 1954; Sears et al., 1957). Based on these findings, it was predicted in the present study that daughters of middle and upper-middle socioeconomic class families would be more empathic and higher in feeling SOA than daughters of lower and upper-lower socioeconomic class families. These predictions were not supported by the data. Socioeconomic class did not make a significant difference in empathic ability or SOA. Again, two additional 1-way Anova tests were conducted a posteriori to the main analyses; socioeconomic class did not make a significant difference in WTI or WTC. These findings indicating no socioeconomic class effects are difficult to understand. The distribution of socioeconomic status (SES) scores approximated normality; the method of obtaining SES scores was similar to that used by both Maccoby and Gibbs and Sears et al. One possibility that emerges for understanding differences between the present and previous findings concerns changes in American social class structure. The Maccoby and Gibbs and Sears et al. studies were conducted in the middle and late 1950's. There is some evidence that differentiation based on socioeconomic class was more sharply defined at that time than it is today. Coleman and Neugarten (1971) for example, in studying changes in American social class structure from the mid-1950's to the late 1960's, concluded that:

> Economic and technological changes are producing not only raised standards of living but changed relationships between various classes. Some of the differences between classes are becoming obliterated. The lines between upper class and middle class, for example, seem to be less clearly delineated [than in the 1950's], with less emphasis being placed on lineage... The line between white-collar and blue-collar is also believed to be disappearing as more and more blue-collar workers have entered the middle income group (Coleman and Neugarten, 1971, p. 278).

Thus, it may be that the mixing and merging of certain socioeconomic classes has diluted differences that were present 20 years ago. Of course, this is only speculation, and other factors, unknown to the author, may be contributing to the lack of socioeconomic class effects.

It will be recalled that the small number of mothers used in the pilot work deemed it necessary to test for internal consistency of the warmth interview questions in the main study. Results of ten part-whole correlations demonstrated internal consistency; all WTI questions were significantly and positively correlated with total WTI index, and all WTC questions were significantly and positively correlated with total WTC index. In examining these correlations (see Table 4), it is interesting to note that while many questions were correlated with the opposite index (as well as their own), in no case did a warmth question correlate higher with the opposite index than with its own. This finding adds strength to the internal consistency of the warmth interview.

A final note concerns the relationship between pilot work and main study findings. The correlations between SOA and empathy, SOA and VIQ, and empathy and VIQ were found in nearly the same proportions in both the pilot work and the main study (see Table 6). These proportional relationships add strength to the reliability of the SOA and empathy tests.

Concluding Comments

The major finding of theoretical importance in this study is the consistent evidence that maternal warmth makes a significant difference in the development of empathy and SOA in the female child. The direction of difference is positive, with daughters of high-warm mothers being more empathic and feeling in SOA than daughters of low-warm mothers. The data are in accord with (a) the psychoanalytic formulations that warm mother-infant communication is a main factor in the development of empathic ability, and (b) the social learning hypothesis (derived from social learning data) that empathic behavior develops from imitation of a nurturant same-sex parent.

Other significant findings in the present study include (a) the existence of positive relationships between empathy and SOA, WTI and WTC, and empathy and VIQ, (b) the noninteraction of VIQ and maternal warmth in their influence upon empathic ability, and (c) the tendency of last-borns to receive more maternal warmth than first- and only-borns.

Table 6

Comparison of Pilot Work and Main Study Findings

	Pilot Work	Main Study
Comparison Group	Pearson r	Pearson r
SOA and Empathy	.59	.49
SOA and VIQ	.06	.18
Empathy and VIQ	.35	.28

The present study provides no information about the influence of fathers in the development of empathic ability and SOA, nor does it address the issue of empathic development in boys. Certainly, these are important areas for future empirical study. Investigation of the effects of discontinuous maternal warmth on empathy and SOA would contribute greatly to our knowledge of empathic development. Finally, some longitudinal data on empathic ability and feeling SOA (i.e., is the high empathizer at age 8 still a high empathizer at 15, 20, 30, etc. years of age?) would add considerable breadth to the present findings.

APPENDIX A

PILOT WORK PARENT PERMISSION FORM

October 10, 1973

Dear Parents,

The Hill School has been asked to participate in a psychological research project which will focus on the way children understand the feelings of other people. The child taking part will be asked to look at pictures of children involved in various activities (playing with friends, doing homework, etc.) and to "tell about" what she sees. The procedure takes approximately 20 minutes for each child.

The project has been approved by the Superintendent of Schools. All materials collected in this study will be kept in the strictest confidence and no child will be identified by name at any time.

Your child's class is one of the third grade classes that will be involved in this study. Please indicate on the tear-off portion below your permission or non-permission to have your child participate. We would appreciate your returning these slips with your child no later than October 17.

Feel free to call me for further information.

Sincerely,

John P. Smith,
Principal

Child's Name ________________________________

Yes-- I give permission for my child to participate in the research project.

No -- I do not give permission for my child to participate in the research project.

APPENDIX B

SCORING SYSTEM FOR SOA TEST

1 point

a) literal description of the figure or part of the figure.
e.g., "He's long"; "He has funny fingers"; "bent knees."

b) no answer or "I don't know."

c) statement of what the figure is.
e.g., "It's a man"; "Looks like a shape."

d) figure in motion--but the motion is attributed to outside force rather than inner force.
e.g., "His body is being pulled over there."

e) figure in motion--but the motion is attributed to a body part rather than the whole person.
e.g., "His face is facing to the right"; "His head is going this way"; "His arm is resting on his leg."

2 points

a) description of the entire figure in action--the movement is coming from within the person.
e.g., "He's running"; "He's jumping"; "He's sitting down on a box"; "He's folding his hands"; "He's catching a ball."

3 points

a) general human trait--not clearly an inner feeling of the figure.
e.g., "He's friendly"; "He's a real tough guy"; "He's a shy person."

b) description of inner motivation--person does or does not want something; person does or does not want to do something; person is trying to do something.
e.g., "Maybe he wants to do a dance"; "He doesn't want the thing in his hand"; "He's trying to push something away."

APPENDIX B (Continued)

c) general mood state or attitude.
e.g., "He's in a bad mood"; "He doesn't know what to say"; "He has nothing to do."

d) description of figure saying a specific idea, without mentioning the specific quote.
e.g., "He's telling someone to stop"; "He's telling someone what he wants for his birthday."

e) description of figure thinking, without mentioning specifically what he is thinking about.
e.g., "He's sitting on a box and thinking."

4 points

a) description of the figure's subjective state.
e.g., "He's feeling very happy"; "He's kind of sad"; "He feels scared"; "He's feeling wet and cold."

b) figure is thinking or wondering about something specific.
e.g., "He's wondering if he's going to be invited to the party"; "He's thinking about the good time he had with his friend."

c) figure is saying something specific and is quoted.
e.g., "He's saying, 'I don't know.'"; "He's telling someone, 'Don't do that because you'll get in trouble.'"

Maximum number of points = 40

Minimum number of points = 10

APPENDIX C

INSTRUCTIONS AND ACCOMPANYING STORIES FOR EMPATHY TEST

Instructions

"That was very good [referring to SOA test]. Now I am going to show you some more pictures, but this time, I am going to tell you a story about each picture. After I am done telling the story, I will ask you a question. Are you ready for the first one?"

Accompanying Stories

Card 8--"This little girl was playing outside. Suddenly she remembered that she had a birthday party to go to that afternoon. So she comes running in the house and asks her mother to help her get ready for the party. But the mother says she can't help because she (the mother) has to take care of the baby. Tell about the people in this picture; what do you suppose they are thinking and feeling right now?"

Card 9--"This little girl was supposed to be washing the dishes. The grandmother comes into the living room and finds the little girl watching television. None of the dishes has been washed. Tell about the people in this picture; what do you suppose they are thinking and feeling right now?"

Card 2--"This little girl has just come home from school. She is taking some cookies out of the bowl and she is telling her mother that some of the children in school said she was very pretty. Tell about the people in this picture; what do you suppose they are thinking and feeling right now?"

Card 1--"These four girls are all friends. They have known each other for a long time. This girl [examiner points] has just moved into the neighborhood. She has never talked to any of these four girls before. She is about to go over to ask if she can play with them. They see her coming. Tell about the people in this picture; what do you suppose

APPENDIX C (Continued)

they are thinking and feeling right now?"

Card 7--"This little girl has just walked into the kitchen. As she stands there, she hears her father telling her mother that he just lost his job. Tell about the people in this picture; what do you suppose they are thinking and feeling right now?"

Card 6--"This little girl is going on a vacation to her grandmother's house. Her mother is telling her to be good there and to have fun. The girl will be away for two months. Tell about the people in this picture; what do you suppose they are thinking and feeling right now?"

Card 11 (control card)--"The mother just came home and found the little girl's room very messy. She is asking the girl to please clean it up. Tell about the people in this picture; what are they wearing right now?"

APPENDIX D

SCORING SYSTEM FOR EMPATHY TEST

0 points

a) character not mentioned at all.

b) character described with no mention of thought or feeling and no description of human trait.
e.g., Card 2--"The girl is getting cookies for her friend."
Card 1--"Those girls will ask her to play."

1 point

a) child tells how character will feel later or how character felt previously.
e.g., Card 6--"The mother will probably miss her."
Card 2--"The little girl felt happy in school."

b) child mentions human trait(s) about character but not inner thoughts and/or feelings.
e.g., Card 1--"The four girls look friendly."
Card 9--"That girl looks lazy."

c) not clear if it's an inner feeling or thought, or just a statement of fact.
e.g., Card 7--"She wants to help."
Card 9--"The little girl wanted to watch T.V. instead of doing the dishes."

d) not clear whether character is speaking out loud (not an inner thought) or speaking to herself (as an inner thought).
e.g., Card 1--"The four girls must be saying, 'Here she comes. Let's see what she wants.'"

2 points

a) child mentions thought and/or feeling of a character.
e.g., Card 9--"The grandmother is mad because the little girl didn't wash the dishes."
Card 2--"The mother is feeling proud and happy that the kids said her child was pretty."

APPENDIX D (Continued)

Card 1--"That girl must be feeling so shy and scared right now."
Card 8--"The mother is thinking about the baby. She's wondering who would take care of him if she helped the girl."

Plus 1 point

a) for every additional character (character that does not appear on the card) who is mentioned with thought and/or feeling.
   e.g., Card 8--"The baby is glad someone is holding him."
   Card 6--"The grandmother is feeling happy that the little girl is coming to visit."

b) for any of the four girls on Card 1 who is mentioned separately.
   e.g., "This girl is feeling glad that the little girl is coming over, but that girl is mad that they'll have to start a new game."

Total number of characters that can be described (on six cards) = 13.

Maximum number of points = 26+ (plus any additional characters mentioned).

Minimum number of points = 3 (child will be removed from sample if unable to achieve more than 2 points).

APPENDIX E

TRAINING PROCEDURE

Training for Concept of Feeling

a) Examiner points to happy face and says, "This little girl just found out that she won a prize in a contest. How do you suppose she's feeling right now?" (work with the child until she gets the idea).

b) Examiner points to scared face and says, "Now look at this little girl. She just dreamed that she was being chased by a tiger. How do you suppose she's feeling right now?" (child gets no help).

c) Examiner points to sad face and says, "This little girl has looked everywhere for her dog and she can't find him. How do you suppose she's feeling right now?" (child gets no help).

Training for Concept of Thinking

a) Examiner points to mad face and says, "Look at this little girl. She just found out that her brother broke her favorite toy. What do you suppose she is thinking right now?" (If child answers incorrectly, say, "No . . . Let me explain what I mean by thinking. When you think, you are saying certain things to yourself in your head. For example, when this little girl found out that her brother broke her favorite toy, she might have thought, 'I wish he hadn't broken my toy,' or 'I hope my mother buys me a new toy,' or something like that. So let's try another one.")

b) Examiner points to happy face and says, "This little girl just found out that she is going to a birthday party. What do you suppose she is thinking right now?" (child gets no help).

c) Examiner points to sad face and says, "This little girl just got ink on her new dress. What do you suppose she is thinking right now?"

Criterion score = 2 out of 3 correct responses on feeling and/or thinking training.

APPENDIX F

INSTRUCTIONS TO TEACHERS AND THE FIVE SITUATIONS TASK

Dear Ms. Jones,

As you know, I have been studying the way in which children understand the feelings of other people, and have tested some of the girls in your class. As one part of my study, I would like to have your impressions of how these girls would react to five hypothetical classroom situations. Enclosed are a set of answer sheets--one for each girl in the study. I would appreciate your responding to each situation as it applies to the girl listed at the top of the answer sheet. For each situation, there are five responses to choose from. Please circle only one answer. If you are not sure of a response, please feel free to guess. I have included a "no opinion" choice, but would appreciate your using it only if it is impossible for you to venture a guess.

Thank you very much for your time and your cooperation.

Sincerely yours,

Susan Rashba

APPENDIX F (Continued)

Five Situations Task

Answer Sheet for Allison L

1) Imagine the following situation. A child in your class (Jane Doe) has been asked to read aloud from a book. As she starts to read, her voice becomes shaky and she finds herself stumbling over words. Now supposing someone asks Allison to "tell something about Jane Doe." Which of the following comments would Allison be most likely to make? (Please circle only one)

    a) "Jane Doe has got on a blue dress. She has a ribbon in her hair."

    b) "Jane Doe is holding on to a chair. She is trying to read."

    c) "Jane Doe looks nervous. She looks like she might cry."

    d) "Jane Doe must be feeling very scared. Maybe she's afraid everyone will laugh at her."

    e) No opinion.

2) Imagine the following situation. You read the class a story about a girl and her mother and father who are going to have Grandmother come live with them. You ask Allison to tell about how the people in the story are feeling. Which of the following comments would Allison be most likely to make? (Please circle only one)

    a) "This little girl is going to have a nice surprise when she finds out her Grandmother is coming to her house. She and her Grandmother always have a lot of fun together."

    b) "The little girl is feeling happy that her Grandmother is coming to her house. She's very excited and can't wait for her Grandmother to come."

Answer Sheet for Allison L.

c) "This little girl is feeling happy that her Grandmother is coming to her house. The Mother and Father are kind of happy--but kind of sad too because sometimes the Grandmother bothers them."

d) "This little girl is feeling happy that her Grandmother is coming to her house. The Mother and Father are kind of happy--but kind of sad too because sometimes the Grandmother bothers them. The Grandmother is mostly sad because she has to leave her own house."

e) No opinion.

3) Imagine the following situation. _ _ _ _Allison_ _ _ _ has just come back from a vacation. She is asked to tell the class about one of the following topics related to her vacation. Which topic do you think she would chose to speak on? (Please circle only one)

a) a description of how she was feeling during her vacation.

b) a description of the people she met during her vacation.

c) a description of the activities she participated in during her vacation.

d) a description of the house she stayed at during her vacation.

e) No opinion.

4) Imagine the following situation. _ _ _ _Allison_ _ _ _ overhears you talking to another teacher about a problem you are having with Lisa Smith. The problem is that Lisa is shy, withdrawn, and has no friends. Lisa's mother refuses to recognize there is a problem and will not seek out help for Lisa. Which of the following seems most true of _ _ _ _Allison_ _ _ _ as she stands there, listening to your conversation. (Please circle only one)

APPENDIX F (Continued)

Answer Sheet for Allison L

a) Allison does not understand what it is like for Lisa to be so alone and does not think about the conversation for very long.

b) Allison thinks about how lonely it must be for Lisa to be so shy and have no friends.

c) Allison thinks about how lonely it must be for Lisa to have no friends. She also thinks about how upset you must feel that you can't help Lisa.

d) Allison thinks about how lonely it must be for Lisa to have no friends. She also thinks about how upset you must feel that you can't help Lisa. She also thinks about Lisa's mother--how upset she must feel to hear that her child has a problem.

e) No opinion.

5) Imagine the following situation. You show the class a picture of a girl. The girl is seen from the back. Her arms are outstretched, and it looks like she might be running towards someone or something. Now you ask Allison to "tell something" about this girl. Which of the following comments would Allison be most likely to make? (Please circle only one)

a) "She's running and she's probably real happy. Maybe she's telling someone to wait for her."

b) "She must be running towards someone. She probably has a smile on her face."

c) "It looks like she's running. She's throwing her arms out."

d) "She's got her arms out. She's kind of tall."

e) No opinion.

APPENDIX G

SCORING SYSTEM FOR THE FIVE SITUATIONS TASK

Situation 1

a) 1 point
b) 2 points
c) 3 points
d) 4 points
e) 0 points

Situation 2

a) 1 point
b) 2 points
c) 3 points
d) 4 points
e) 0 points

Situation 3

a) 4 points
b) 3 points
c) 2 points
d) 1 point
e) 0 points

Situation 4

a) 1 point
b) 2 points
c) 3 points
d) 4 points
e) 0 points

Situation 5

a) 4 points
b) 3 points
c) 2 points
d) 1 point
e) 0 points

Note. The participating child is eliminated from the validity sample if teacher answers "No opinion" more than once. If teacher responds "No opinion" to one situation, the other four situations are prorated to determine total score.

Maximum score = 20.

Minimum score = 4.

APPENDIX H

INSTRUCTIONS AND ANSWER SHEET FOR EMPATHY RANKINGS

The following is a list of the girls in your class who participated in this study. Please order the girls according to their ability to understand the feelings of another person (in other words, to put themselves in the place of another person . . . to be empathic).

List first the girl who seems to you to be most empathic; list second the girl who seems next most empathic, and so on. The girl at the bottom of the list should be the girl who seems to you to be least empathic. If two girls seem tied on the ability to empathize, please put a tie bracket next to their names. For example, if you ordered the following four girls according to their ability to empathize,

Girls who participated in the study	Girls as ordered from most empathic to least empathic
Elise	Ruth
Jennifer	(Jennifer
	(
Karen	(Elise
Ruth	Karen

then Ruth would be most empathic, Jennifer and Elise next most empathic (they are tied), and Karen, least empathic.

Please write out your list, ordered according to ability to empathize, on the next page:

APPENDIX H (Continued)

Girls who participated in the study	Girls as ordered from most empathic to least empathic
Judith G.	
Maura H.	
Christine K.	
Barbara M.	
Erin M.	
Allison O.	
Lynn R.	

APPENDIX I

WARMTH INTERVIEW

Question 1. "Would you think back to when _ _Name_ _ _ was a baby. Who took care of her mostly then?

a. probe (optional) "Do you remember how that decision got made--that you [or whoever] would be the one to take care of her?"

Rating Scale

1 point--practically no caretaking by M. M didn't want to be around baby ("She made me nervous"; "I couldn't handle being around her then.")

2 points--practically no caretaking by M. M had to work or there were circumstances beyond M's control (e.g., she was sick). M does not indicate an aversion to being around baby . . . she might say she wishes she had been able to take care of baby.

3 points--some caretaking. M didn't want to be around baby all the time; shows little enthusiasm for caretaking.

4 points--a) all, or practically all caretaking done by M. M does not demonstrate enthusiasm for caretaking. Spirit of "I had to do it" . . . "Who else would do it if not for me" . . . or "Someone suggested I do it" . . . or "I guess it was just automatic that I be the one" . . . or "I was here anyway with the other children so I did it" . . . or "I was tired of working."

b) some caretaking. M shows neither enthusiasm nor distaste for caring for infant.

5 points--some caretaking. M shows enthusiasm about the time she did spend with baby.

APPENDIX I (Continued)

6 points--all, or practically all caretaking done by M. M indicates that she wanted to stay home with baby without saying she enjoyed or was happy about taking care of baby.

7 points--all, or practically all caretaking done by M. M indicates enthusiasm and satisfaction about taking care of baby. Lets you know that not only did she have to do it, but that she was happy to do it.

APPENDIX I (Continued)

Question 2. "All babies cry of course. Some mothers feel that if you pick up a baby every time it cries, you will spoil it. Others feel you should never let a baby cry for very long. How do you feel about this, especially as it applied to _ _Name_ _ _?"

a. "Was _ _Name_ _ _ a baby who cried a lot, or was she more on the quiet side?"

b. "What was your usual method of comforting her?"

Rating Scale

1 point--did not pick up baby very much when she cried. Suggests that baby was a nuisance with all that crying.

2 points--picked up baby when necessary. Baby cried a lot--fussed a lot--this seems to have been annoying to M (perhaps kept them up at night, ruined their vacations, etc.).

3 points--picked up baby when necessary. Baby was a good baby--not fussy--but when she did cry, it got M upset and nervous.

4 points--did not pick up baby too much because couldn't always get to baby--too many other children in the family, or M too busy with other work. Thought baby was a good baby--an easy baby.

5 points--picked up baby when baby needed her. Baby was fussy--cried a lot (perhaps colicky), but this doesn't seem to have bothered M. M used human contact (rocking, holding) to comfort baby.

6 points--picked up baby when baby needed her. Used human contact (rocking, holding) to comfort baby. Baby neither very fussy nor very easy--in between--or fussy for a few months (and this didn't bother M) and then became an easy baby.

7 points--picked up baby when baby needed her. Used human contact to comfort baby. Indicates that baby was a "good" or "easy" baby.

APPENDIX I (Continued)

Question 3. "Some people say that babies have a way of sensing how their mothers are feeling and that mothers have a way of sensing how their babies are feeling. Other people say that this really isn't true--that it's more of a myth. How do you feel about this?"

a. "How did this apply to you and _ _Name_ _ _?"

Rating Scale

1 point--not true. "I think it's more of a myth. I don't think either one can really tell how the other is feeling"; "I never experienced it."

2 points--one part slight and the other part not true. "Maybe she could tell what I was feeling--but I really couldn't tell what she was feeling"; "Maybe I could tell what she was feeling--but she didn't really sense what I was feeling."

3 points--a) slight amount of reciprocal feeling. "I don't remember too well, but I guess it's true in a certain way."

b) one part definite and the other part slight. "I know I could definitely tell how she was feeling, but I doubt she could really tell how I was feeling."

5 points--a) moderate amount of reciprocal feeling. "I think that's true"; "That was pretty true with us."

b) one part definite and the other part moderate. "She definitely knew how I was feeling, and I could pretty much tell how she was feeling."

7 points--great amount of reciprocal feeling. "I think babies and mothers know exactly how the other one is feeling"; "We definitely could sense how each other was feeling"; "It was just amazing how she could sense how I was feeling and I could sense how she was feeling."

APPENDIX I (Continued)

Question 4. "Did you have extra time to spend with _ _Name_ _ _ when she was a baby besides the time that was necessary for feeding her, changing her, and regular care like that?"

a. If yes--"Tell me about what you did in this time?"

Rating Scale

1 point--not much extra time to spend with baby. M indicates (or insinuates) she didn't want to be with baby any more time than was necessary.

2 points--had extra time to spend with baby. Didn't enjoy baby or didn't think there was much one could do with a young baby ("We'd mostly just be in the same room. You can't do much with them until they're older.")

3 points--did not have much extra time because of reality factors (e.g., too many other children; had to work; sick during this time; etc.).

4 points--a) did not have much extra time, but M indicates she wishes she had more time to spend with baby.

b) did not have much extra time, but seemed to enjoy the time she did have with baby--seemed to want to spend as much time as she could with the baby.

5 points--had extra time to spend with baby. Describes being with and playing with baby, but does not indicate being happy with and enthused about baby.

7 points--had extra time to spend with baby. Indicates she was happy and enthused about being with and playing with baby. (Might indicate her enthusiasm by saying she hugged and cuddled baby.)

APPENDIX I (Continued)

Question 5. "Do you think babies are fun to take care of, or do you think they're more interesting when they're older?"

Rating Scale

1 point--no fun (drudgery, distasteful, mother tense and worried).

2 points--a) not much fun--could get boring, routine, confining, etc.

b) problems at both ages--no indication of enjoyment of infants.

3 points--indicates neither distaste for nor enjoyment of infants. ("I don't mind taking care of a baby, but I guess they're more interesting when they're older.")

5 points--a) some fun. M indicates enjoyment of infants and also mentions that caretaking was sometimes a chore ("I really enjoyed my babies, although sometimes, you know, it could get to be confining.")

b) enjoyed babies, no dislike of caretaking, but feels they're more interesting when they're older ("I really do enjoy babies, although I have to say they are more interesting when they're older.")

c) normally does not enjoy infants, but found _ _Name_ _ _ to be an exception ("Usually babies make me nervous, but with _ _Name_ _ _ it was different; she was actually enjoyable.")

6 points--a) enjoys infants better than older ones, but doesn't elaborate or show a great deal of enthusiasm about infants--just states she enjoys them ("Yes, I would say I enjoy infants better than older children.")

b) enjoyed all ages, including infants, without elaborating on how, specifically, she enjoyed infants.

APPENDIX I (Continued)

7 points--a great deal of fun. Babies are appealing, cute, lovable. Talks about caring for babies with enthusiasm.

APPENDIX I (Continued)

Question 6. "I'm wondering if you could tell me how you and _ _Name_ _ _ get along together now. For instance, what sorts of things do you enjoy in _ _Name_ _ _?"

Rating Scale

1 point--predominantly aggrevating. Finds child irritating--feels tension when child is around. Can't say anything specific that is enjoyable about child.

3 points--ambivalent. Some warmth--and some hostility. Enjoys a few things in child, but seems to feel more irritation towards child than warmth.

4 points--mentions only one thing she enjoys about child, without mentioning anything irritating about child.

5 points--talks of child with enthusiasm. Enjoys many things (two or more) about her, but also adds a few irritating things about her. M seems to feel more warmth towards child than irritation.

6 points--mentions things she enjoys doing with child, without mentioning any personal qualities about child that she enjoys.

7 points--a) talks of child with a great deal of enthusiasm. Enjoys many things (two or more) about her, and mentions no irritating things.

b) states she enjoys "everything" about her (without necessarily mentioning a specific quality).

APPENDIX I (Continued)

Question 7. "In what ways does _ _Name_ _ _ get on your nerves?"

Rating Scale

1 point--predominantly aggrevating. Just about everything child does gets on M's nerves. No suggestion of warmth in the relationship.

2 points--many things (more than two) get on M's nerves. At times, child can be irritating, burdensome. No suggestion of warmth in the relationship.

3 points--relationship has changed from aggrevating to better, or from good to aggrevating ("We used to have a pretty good relationship, but it's been gradually getting worse"; "Things are really good between us now, but there used to be a lot of friction between us").

4 points--only one thing gets on M's nerves, but this behavior or quality is very irritating and unacceptable to M. No additional comments about good relationship between them.

5 points--very few things get on M's nerves, although a few things do (no more than two). M seems able to accept these things without feeling that child is a generally annoying or irritating person. No additional comments about good relationship between herself and child.

7 points--a) very few things get on M's nerves (no more than two). Adds somewhere in her response that they have a good relationship, or tells some things she enjoys about child, or adds that child is "just a generally good kid."

b) only one thing gets on M's nerves and she adds "That's the only thing that gets on my nerves."

c) M states that child really doesn't get on her nerves.

APPENDIX I (Continued)

Question 8. "Some mothers are demonstrative in their affection towards their children--hugging, kissing, cuddling; others prefer to be more reserved. How would you describe yourself?"

a. "How about _ _Name_ _ _? Is she the demonstrative type or does she prefer to be more reserved?"

Rating Scale

1 point--practically no show of affection between mother and child. Reason seems to be that the relationship is too tense.

2 points--not much show of affection between them. Reason seems to be that it's not in M's nature--M is reserved--rather than because of tension between them.

3 points--M is demonstrative type, but child pulls away from her.

4 points--some exchange of affection. M indicates she is in the "middle" ("I give them their share . . . I'm not overly overly loving"); child can be reserved or demonstrative.

5 points--M demonstrative. Doesn't indicate how child is with M in terms of showing affection ("Oh I'm very demonstrative and _ _Name_ _ _ is the type who likes to hug and kiss relatives when they come to visit") or indicates that child is reserved or in "middle."

7 points--much show of affection. M is demonstrative and indicates that her affection is reciprocated by the child.

APPENDIX I (Continued)

Question 9. "How much time do you have at this point to play with _ _Name_ _ _ just for your own pleasure? In other words, do you find you have much extra time, or are your days kind of hectic?"

a. If M has extra time--"Can you tell me what kinds of things you do together?"

Rating Scale

1 point--does not find the time. Indicates that the relationship with the child is primarily aggrevating.

2 points--a) finds some time. Shows signs of irritation with the child ("I don't enjoy games with her. She's so competitive . . . not an easy child to play with").

b) M makes time to spend with child, but only because she feels she should; M gets no pleasure out of it.

c) finds time to spend with child, but can't think of anything special they enjoy doing together.

3 points--doesn't spend much time, but this is mainly because of reality factors (e.g., M works; has to take care of other children).

4 points--doesn't spend much time, but indicates she wishes she had more time to spend with child.

5 points--a) spends much time with child, but doesn't say whether or not she enjoys the time they spend together (might just list the things they do together).

b) doesn't have much time to spend, but indicates she enjoys the time they do spend together.

7 points--spends much time with child. Enjoys being with her--indicates warmth towards child in her answer ("We go to the beach together a lot . . . She's really quite a swimmer; I feel proud watching her").

APPENDIX I (Continued)

Question 10. "Remember that question I asked you about whether babies and mothers could sense the way the other was feeling? Well how does that apply now between you and _ _Name _ _? In other words, do you think you can sense how _ _Name _ _ is feeling and that she can sense how you are feeling, or do you think that's not so true?"

a. probe (optional)--"Do you think this has increased, decreased, or remained the same since she was a baby?"

Rating Scale

1 point--not much idea how the other one is feeling.

2 points--one part slight and the other part not true. "Maybe she can tell what I am feeling--but I really can't tell what she is feeling"; "Maybe I can tell what she's feeling--but she can't really tell how I'm feeling."

3 points--a) slight amount of reciprocal feeling. "I guess that is sometimes true with us."

b) one part definite and the other part slight. "I can definitely tell how she's feeling, but I doubt she can really tell how I'm feeling."

5 points--a) moderate amount of reciprocal feeling. "I think we can pretty much tell how the other one is feeling."

b) one part definite and the other part moderate. "I can definitely tell how she's feeling, and she can probably tell how I'm feeling."

7 points--great amount of reciprocal feeling. "It's amazing how we can really feel how the other one is feeling"; "Oh yes--it's definitely true between us."

APPENDIX J

BIOGRAPHICAL QUESTIONNAIRE--PILOT WORK

(In this questionnaire, "the participating child" will refer to your daughter in the third grade.)

1) Has the participating child been living with you since the first few days of her life?

Yes ________ No ________

If No, how old was participating child when she began living with you?

____

2) Have you and the participating child ever been apart for longer than two months?

Yes ________ No ________

If Yes, please list dates of separation and age of child at time of separation:

Dates of Separation	Age of Child at Time
from ______ to ________	________
from ______ to ________	________
from ______ to ________	________

3) Please list name, sex, and present age of all children in the family (including participating child). Start with the oldest.

Name	Sex	Present Age

APPENDIX J (Continued)

Name	Sex	Present Age

4) Are all of these children the biological siblings of the participating child?

Yes ________ No ________

If No, please list by name children who are not the participating child's biological siblings. For how many years have the two children lived in the same house?

Name of Sibling	Number of years he/she has lived in same house as participating child

5) Is the child's natural or adoptive father presently living at home?

Yes ________ No ________

If No, how long has he not been in the home?

____

APPENDIX J (Continued)

6) What is your religious affiliation? ________________

What is your husband's religious affiliation? _______

____

What is participating child's religious affiliation?

____

7) Please list:

a) your occupation _____________________________

b) your husband's occupation ___________________

___________________ and

c) your family's annual income (approx.) ________

____

8) How important is it to you that your child (participating child) do well in school? (Please circle the one answer that best applies.)

a. Unimportant.

b. Not very important. (It's not so important as long as she doesn't fail a grade or a subject.)

c. Fairly important. (She should devote some time and energy to her schoolwork.)

d. Important. (She should devote a good deal of time and energy to her schoolwork.)

e. Very important. (She should devote most of her time and energy to her schoolwork.)

APPENDIX J (Continued)

9) How important is it to you that your child (participating child) be able to understand the thoughts and feelings of other people? (Please circle one answer.)

a. Unimportant.

b. Not very important. (It's not so important as long as she isn't cruel to other people.)

c. Fairly important. (She should have some understanding of how other people are thinking and feeling.)

d. Important. (She should have much understanding of how other people are thinking and feeling.)

e. Very important. (This quality is one of the most important for my child to have.)

10) Which would you say is more important for your child--doing well in school or being able to understand the thoughts and feelings of other people?

a. Doing well in school.

b. They are equally as important.

c. Being able to understand the thoughts and feelings of other people.

APPENDIX K

REVISED BIOGRAPHICAL QUESTIONNAIRE

(In this questionnaire, "the participating child" will refer to your daughter in the third grade.)

1) Has the participating child been living with you since the first few days of her life?

Yes ________ No ________

If No, how old was participating child when she began living with you?

____

2) Have you and the participating child ever been apart for longer than two months?

Yes ________ No ________

If Yes, please list dates of separation and age of child at time of separation:

Dates of Separation	Age of Child at Time
from ________ to ________	________
from ________ to ________	________
from ________ to ________	________

3) Please list name, sex, and present age of all children in the family (including participating child). Start with the oldest.

Name	Sex	Present Age

APPENDIX K (Continued)

Name	Sex	Present Age

4) Are all of these children the biological siblings of the participating child?

Yes ________ No ________

If No, please list by name children who are not the participating child's biological siblings. For how many years have the two children lived in the same house?

Name of Sibling	Number of years he/she has lived in same house as participating child

5) Is the child's natural or adoptive father presently living at home?

Yes ________ No ________

If No, how long has he not been in the home?

____

APPENDIX K (Continued)

6) What is your religious affiliation? ________________

What is your husband's religious affiliation? _______

____

What is participating child's religious affiliation?

____

7) Please list:

a) your occupation ______________________________

b) your husband's occupation ____________________

____________________ and

c) your family's annual income (approx.) ________

____

APPENDIX K (Continued)

Below are qualities, listed in pairs, that a 7 to 9 year old girl might have. In each pair, please check the quality that you think is the more important in a 7 to 9 year old girl. For example, look at the following pair:

that she is honest ________ : that she is neat ________

If you think honesty is a more important quality than neatness in a 7 to 9 year old girl, you would respond as follows:

that she is honest ________ : that she is neat ________

If you find a pair of qualities that seem equally important, check one of them anyway, even if you have to make a guess. Please answer all of the following:

1) that she is dependable ______ : that she is a good student ______

2) that she is curious about things ______ : that she is popular with other children ______

3) that she understands the feelings of others ______ : that she is dependable ______

4) that she obeys her parents ______ : that she is a good student ______

5) that she understands the feelings of others ______ : that she is curious about things ______

6) that she is dependable ______ : that she obeys her parents ______

7) that she is a good student ______ : that she is popular with other children ______

8) that she is curious about things ______ : that she is dependable ______

9) that she is popular with other children ______ : that she obeys her parents ______

APPENDIX K (Continued)

10) that she understands the feelings of others ______ : that she is a good student ______

11) that she is dependable ______ : that she is popular with other children ______

12) that she obeys her parents ______ : that she understands the feelings of others ______

13) that she is a good student ______ : that she is curious about things ______

14) that she is popular with other children ______ : that she understands the feelings of others ______

15) that she obeys her parents ______ : that she is curious about things ______

APPENDIX L

MAIN STUDY PARENT PERMISSION FORM

September 19, 1974

Dear Mothers,

I would like to invite you to participate in a research project that is being conducted by a graduate student. This student's study consists of two parts. First, she will ask third-grade girls to look at pictures of children involved in various activities (playing with friends, doing homework, etc.) and to "tell about" what is happening in the picture. Then, she will ask mothers of third-grade girls a few questions about how they view their own child. These questions take approximately 30 minutes, and the student will meet with each mother at the mother's convenience. Mothers who have already participated in this study have found the interview an interesting and enjoyable experience.

The project has been approved by the Superintendent of Schools. All materials collected in this study will be kept in the strictest confidence; no parent or child will be identified by name at any time.

Your child's class is one of the third-grade classes involved in this study. Please indicate on the tear-off portion below your permission or non-permission to have yourself and your child participate. We would appreciate your returning this slip with your child no later than September 25, 1974.

Feel free to call me for any further information.

Sincerely yours,

John Doe, Principal

APPENDIX L (Continued)

YES -- I give permission for myself and my child to participate in this study.

NO -- I do not give permission for myself and my child to participate in this study.

Child's Name ____________________________

Parent's Signature ______________________

LIST OF REFERENCES

American Psychiatric Association. A Psychiatric Glossary. Washington, D.C.: American Psychiatric Association, 1957.

Aronfreed, J. Conduct and Conscience. New York: Academic Press, 1968.

Bach, G. R. Father-fantasies and father-typing in father-separated children. Child Development, 1946, 17, 63-80.

Bandura, A., and Huston, A. C. Identification as a process of incidental learning. Journal of Abnormal and Social Psychology, 1961, 63, 311-318.

Bernstein, B. Social class and linguistic development: a theory of social learning. In A. Halsey, V. Floud, and A. Anderson (Eds.), Society, Economy, and Education. Glencoe, Illinois: Free Press, 1961.

Borke, H. Interpersonal perception of young children: egocentrism or empathy? Developmental Psychology, 1971, 5, 263-269.

Borke, H. The development of empathy in Chinese and American children between three and six years of age: a cross-culture study. Developmental Psychology, 1973, 9, 102-108.

Bowlby, J. Separation anxiety. In P. H. Mussen, J. J. Conger, and J. Kagan (Eds.), Readings in Child Development and Personality. New York: Harper and Row, 1965.

Burns, N., and Cavey, L. Age differences in empathic ability among children. Canadian Journal of Psychology, 1957, 11, 227-230.

Chance, J. E., and Meaders, W. Needs and interpersonal perception. Journal of Personality, 1960, 28, 200-210.

Chandler, M. J., and Greenspan, S. Ersatz egocentrism: a reply to H. Borke. Developmental Psychology, 1972, 7, 104-106.

Cohen, H., and Weil, G. Tasks of Emotional Development Test Manual. Lexington, Massachusetts: D. C. Heath and Company, 1971.

Coleman, R. P., and Neugarten, B. Social Status in the City. San Francisco: Jossey-Bass Inc., 1971.

Cottrell, L. S. The analysis of situational fields in social psychology. American Sociological Review, 1942, 7, 370-382.

Dimitrovsky, L. The ability to identify the emotional meanings of vocal expressions at successive age levels. In J. R. Davitz (Ed.), The Communication of Emotional Meaning. New York: McGraw-Hill, 1964.

Dymond, R. F. A scale for the measurement of empathic ability. Journal of Consulting Psychology, 1949, 13, 127-133.

Dymond, R. F. Personality and empathy. Journal of Consulting Psychology, 1950, 14, 343-350.

Dymond, R. F., Hughes, A. S., and Raabe, V. L. Measurable changes in empathy with age. Journal of Consulting Psychology, 1952, 16, 202-206.

Ferguson, G. A. Statistical Analysis in Psychology and Education. New York: McGraw-Hill, 1959.

Feshbach, N. D., and Roe, K. Empathy in six- and seven-year olds. Child Development, 1968, 39, 133-145.

Freud, A. Some remarks on infant observation. The Psychoanalytic Study of the Child, 1953, VIII, 9-19.

Fromm-Reichmann, F. Principles of Intensive Psychotherapy. Chicago: University of Chicago Press, 1950.

Gilbert, D. C. The young child's awareness of affect. Child Development, 1969, 40, 629-640.

Halpern, H. L., and Lesser, L. N. Empathy in infants, adults, and psychotherapists. Psychoanalytic Review, 1960, 47, 32-42.

Hartup, W. W. Some correlates of parental imitation in young children. Child Development, 1962, 33, 85-96.

Hastorf, A. H., and Bender, I. E. A caution respecting the measurement of empathic ability. Journal of Abnormal and Social Psychology, 1952, 47, 574-576.

Heinicke, C. M. The effects of separating two-year-old children from their parents: a comparative study. Human Relations, 1956, 9, 105-176.

Hekmat, H., Khajavi, F., and Mehryar, A. Some personality correlates of empathy. Journal of Consulting and Clinical Psychology, 1975, 43, 89.

Hess, R., and Shipman, V. Early experiences and the socialization of cognitive modes in children. Child Development, 1965, 36, 869-886.

Hetherington, M., and Frankie, G. Effects of parental dominance, warmth, and conflict on imitation in children. Journal of Personality and Social Psychology, 1967, 6, 119-125.

Kelly, T. L. The selection of upper and lower groups for the validation of test items. Journal of Educational Psychology, 1939, 30, 17-24.

Kerr, W. A., and Speroff, B. J. Validation and evaluation of the empathy test. Journal of General Psychology, 1954, 50, 269-276.

Kohn, M. L. Social class and parental values. American Journal of Sociology, 1959, 64, 337-351.

Lasko, J. K. Parent behavior toward first and second children. Genetic Psychology Monographs, 1954, 49, 96-137.

Levin, H., and Sears, R. Identification with parents as a determinant of doll play aggression. Child Development, 1956, 27, 135-153.

Lipps, T. Das Wissen von Fremden Ichen. Psychol. Unterouchunger, 1907, 1, 694-722. Cited by O. Strunk, Empathy: a review of theory and research. Psychological Newsletter, 1957, 9, 47-57.

Lynn, D. B., and Sawrey, W. L. The effects of father-absence on Norwegian boys and girls. Journal of Abnormal and Social Psychology, 1959, 59, 258-262.

Maccoby, E. E., and Gibbs, P. K. Methods of child rearing in two social classes. In W. E. Martin and C. B. Stendler (Eds.), Readings in Child Development. New York: Harcourt, Brace, and Company, 1954.

May, R. The Art of Counseling. New York: Abingdon Press, 1967.

Mead, G. Mind, Self and Society. Chicago: University of Chicago Press, 1934.

Miller, N. E., and Dollard, J. Social Learning and Imitation. New Haven: Yale University Press, 1941.

Moreno, J. L. Philosophy of the third psychiatric revolution, with special emphasis on group psychotherapy and psychodrama. In F. Fromm-Reichmann and J. L. Moreno (Eds.), Progress in Psychotherapy (Volume 1). New York: Grune and Stratton, 1956.

Mussen, P. H., and Parker, A. L. Mother nurturance and girls' incidental imitative learning. Journal of Personality and Social Psychology, 1965, 2, 94-97.

Olden, C. On adult empathy with children. The Psychoanalytic Study of the Child, 1953, VIII, 111-126.

Piaget, J. P. Six Psychological Studies. New York: Random House, 1967.

Read, K. H. Parents' expressed attitudes and children's behavior. Journal of Consulting Psychology, 1945, 9, 95-100.

Rogers, C. R. The necessary and sufficient conditions of therapeutic personality change. Journal of Consulting Psychology, 1957, 21, 95-103.

Rothenberg, B. Children's social sensitivity and the relationship to interpersonal competence, intrapersonal comfort and intellectual level. Developmental Psychology, 1970, 2, 335-350.

Sarbin, T. Role theory. In G. Lindzey (Ed.), Handbook of Social Psychology (Volume 1). Cambridge, Massachusetts: Addison-Wesley, 1954.

Schafer, R. Generative empathy in the treatment situation. Psychoanalytic Quarterly, 1959, 28, 342-373.

Sears, R. R., Maccoby, E. E., and Levin, H. Patterns of Child Rearing. Evanston, Illinois: Row, Peterson and Company, 1957.

Speroff, B. J. Empathy and role reversal as factors in industrial harmony. Journal of Social Psychology, 1953, 37, 117-120.

Stotland, E., and Dunn, R. E. Empathy, self-esteem, and birth order. Journal of Abnormal and Social Psychology, 1963, 66, 532-540.

Stotland, E., and Walsh, J. A. Birth order and an experimental study of empathy. Journal of Abnormal and Social Psychology, 1963, 66, 610-614.

Sullivan, H. S. Conceptions of Modern Psychiatry. New York: W. A. White Foundation, 1947.

Sullivan, H. S. The Interpersonal Theory of Psychiatry. New York: W. W. Norton and Company, 1953.

Truax, C., and Carkhuff, R. Toward Effective Counseling and Psychotherapy: Training and Practice. Chicago: Aldine, 1967.

Walton, W. E. Empathic responses in children. Psychological Monographs, 1936, 48, 40-67.

Warner, W. L., Meeker, M., and Eells, K. Social Class in America. Chicago: Science Research Associates, 1949.

Warren, H. C. Dictionary of Psychology. New York: Houghton Mifflin, 1934.

Wechsler, D. Wechsler Intelligence Scale for Children. New York: The Psychological Corporation, 1949.

Winer, B. J. Statistical Principles of Experimental Design. New York: McGraw-Hill, 1962.

Yarrow, M. R., Campbell, J. D., and Burton, R. V. Child Rearing: An Inquiry into Research and Methods. San Francisco: Jossey-Bass Inc., 1968.

Zborowski, M. Cultural components in attitudes towards pain. Journal of Social Issues, 1953, 8, 16-31.

BIOGRAPHICAL SKETCH

Susan Marcus Rashba was born in Brooklyn, New York on March 18, 1948. She is the daughter of Ruth and Herman Marcus. She was educated in the New York City public school system, and was graduated from Samuel J. Tilden High School in June, 1965. She continued her education at Jackson College of Tufts University, where she received the degree of Bachelor of Arts, magna cum laude, in June, 1969. Psychology was her major area of study, and she is a member of Psi Chi.

In September, 1969, supported by a USPHS fellowship, she entered the Graduate School of the University of Florida. She received the degree of Master of Arts in psychology in March, 1971. Following graduation, she continued working toward the degree of Doctor of Philosophy in psychology, with a major in clinical psychology and a minor in community psychology. Her internship was done at the South Shore Mental Health Center in Quincy, Massachusetts, from September, 1972 through July, 1973. Following her internship, she spent two years working part-time at the VA Hospital in Bedford, Massachusetts, while conducting her doctoral dissertation research. She expects to receive the degree of Doctor of Philosophy in psychology from the University of Florida in December, 1975.

She is married to Howard W. Rashba and they are currently living in Brighton, Massachusetts.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Jacquelin R. Goldman

Jacquelin R. Goldman, Chairman
Associate Professor of Clinical
Psychology and Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Hugh C. Davis

Hugh C. Davis
Professor of Clinical Psychology
and Psychology

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Richard K. McGee

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Professor of Clinical Psychology
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I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Robert D. Myrick

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Professor of Counselor Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

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This dissertation was submitted to the Graduate Faculty of the Department of Psychology in the College of Arts and Sciences and to the Graduate Council, and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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